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MARCH, 1879.

AS REQUESTED by a correspondent in the January number, we purpose to devote a few pages in each issue to the description of some of our best Annuals. We have in preparation several colored plates, and shall make drawings of others as the season advances and the necessary flowers are obtained. Our purpose is to instruct the people and to teach them to love flowers, and there are not many even of our most successful amateurs who did not take their first lessons in the growing of a few annual-flowering plants. They are generally of easy culture, are obtained at the cost of a few pennies, and the results are speedy and gratifying. The seeds of Annuals are sown in the spring, either in nicely prepared beds in the garden, or in boxes in the house, by those who have no better or more costly arrangements; the plants arrive at maturity in the summer, bud, blossom, ripen their seeds and die in the autumn, having performed their entire mission.

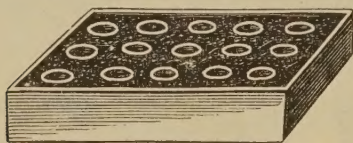
This class of plants, so useful and satisfactory to the beginner, is also invaluable both to the experienced amateur and the professional gardener. There is no forgotten spot in the garden, none from which early flowering bulbs or other spring flowers have been removed that need remain bare during the summer; no bed but can be made brilliant with these favorites—for there is no situation or soil in which some of the varieties will not flourish. Some members delight in shade, others in sunshine; some are

pleased with a cool clay bed, while others are never so comfortable as in a sandy soil with a burning sun. The seed, too, is obtained so cheap as to be within the reach of all, while a good collection of bedding plants would not come within the resources of many; and yet, very few beds filled with expensive bedding plants look as well as a good bed of our best Annuals, like Phlox, Petunia or Portulaca, and for a vase or basket many of our Annuals are unsurpassed. To the Annuals, also, we are indebted mainly for our brightest and best flowers in the late summer and autumn months. Without the Phlox and Petunia and Portulaca and Aster and Stock, our autumn gardens would be poor indeed; and how we would miss the sweet fragrance of the Alyssum, Mignonette and Sweet Pea if any ill luck should deprive us of these sweet favorites. Many of our beautiful climbers, such as the Convolvulus and Cobaea scandens, and nearly all our Everlastings and Ornamental Grasses are included in this section.

The spring weather in many parts of the country is changeable and unpleasant; warm and pleasant for a few days, then wet and cold, with an occasional frost, perhaps, succeeded by several weeks of drying winds, without a drop of rain. In such weather seeds in the ground must have a hard time, and germinate with difficulty. If the weather is not too bad most seeds will grow, but in some cases only the

hardest will germinate, for it must be understood that both warmth and moisture are necessary to the germination of seeds. All know that we can keep dry seeds in the house a long time and they will lie dormant. If we place them in a dish of water or moist earth in a warm room they will grow. If we put seeds in a dish of water and keep them in a cold room they will decay. Before committing seeds to the ground, then, it is best to wait until the soil is warm, and then, with anything like reasonable weather, we have good reason to expect them to grow.

Sometimes, however, we want plants earlier than they can be obtained in this way, and we

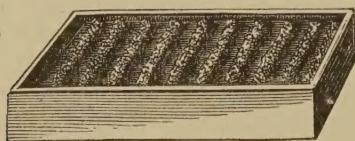


POTS OF SEEDS SUNK IN MOSS.

do not like to take the chances of the weather, so seeds are sown in boxes, or pots, in the house, where sufficient warmth can be secured, and water applied as needed. The difficulty with this plan, especially where seeds are sown in pots, is that the soil becomes dry much sooner than is anticipated, and often the young plants are ruined by drying just as they germinate. We have told these facts a good many times, but experienced readers must bear with us for the sake of beginners.

To prevent this rapid drying of the earth, place the pots in boxes of damp moss or sawdust, as shown in the engraving, or sow in shallow boxes. Glass placed over the pots or boxes prevents the escape of moisture. Those who have the conveniences for hot-beds or cold-frames will, of course, avail themselves of this aid.

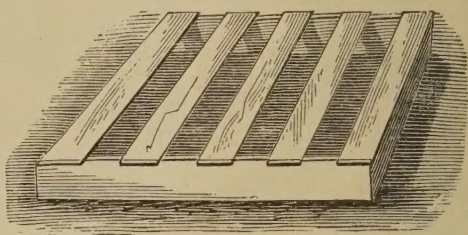
When seeds, especially those somewhat delicate, are grown in the open ground, it is a good



SEEDS IN A BOX.

plan to place a narrow board at the front and back of the bed, to which lath are nailed, something as shown in the engraving, leaving two or three inches between each lath. This affords partial protection from the wind and sun. Whether any such aid is furnished or not, sow seeds in a mellow soil, and not too deep. Seeds should be sown in rows, fine seeds only barely covered by sifting a little earth upon them.

For larger seeds make drills, say an inch broad at the bottom, and in these scatter the seeds rather thinly, covering about two or three times



SEEDS PROTECTED BY LATH FRAME.

their diameter. Of course it is designed to transplant these into the flowering beds. A few Annuals, like the Poppies, with long tap roots, are better sown where they are to flower, as are also some hardy kinds, like Candytuft.

While writing this article we received a communication from the wife of one the leading editors of America, describing her success with Annuals, and their wonderful beauty during the autumn months. We have omitted some flattering words, but have left quite enough, no doubt some of our readers will think.

"I never had much success with Annuals until I became acquainted with your GUIDE and learned about good seed and how to grow them, and now I never fail. My garden is beautiful all the fall with lovely brilliant flowers; I gathered a handsome bouquet on the 20th day of November from it this year, and had Pansies in bloom until Christmas, and the largest and loveliest I ever saw. My Dianthus Pinks are also great pets, I think I had over twenty varieties from one packet of seeds, and such beauties. My fancy runs to rich coloring, and I like beds of one kind of plant of different shade of bright color, the effect is grand among the grass on the lawn. I had one last year of double Petunia, and it was gorgeous. The flowers were larger than any Rose, and almost as handsome. I want one this year of Phlox, and one of Nasturtium, and I also want one of your new and beautiful Amaranth, Sunrise. I intend to do wonders this year, and exhibit my flowers at our State fair, and if I take a prize I will let you know."

THE ASTER.

We will select for our first article on Annuals the Aster. It comes first in the alphabetical list, but we did not choose it on this account mainly, but because of its importance, for it is one of the most valuable of our annual flowers, and in the autumn is unsurpassed by any flower in the garden. Then we love and



SCHILLER ASTER



ORIGINAL ASTER.



OLD CHINESE ASTER.



NEW VICTORIA.



NEWEST DWARF BOUQUET.



DWARF PYRAMIDAL BOUQUET.



NEW CROWN.



ROSE ASTER. PLANT.



ROSE ASTER. FLOWER.

prize the Aster because it was the friend and companion of our early days—we grew it in our little garden half a century ago. It was not then the magnificent flower that it now is; as large, as perfectly double, and as beautiful as the Dahlia, but almost single, and ragged, like the original Aster shown in the engraving; but we thought it very handsome, and so did every one, and we never see a poor semi-double Aster (occasionally a stray one is found in our beds,) but it seems like an old friend, and we have an unpleasant feeling when this intruder is doomed to destruction as unworthy the society of its more refined neighbors.

The Aster was discovered in China, about a century and a half since, by a missionary, and sent to Europe, it being then entirely single. It was first cultivated in France, and was named *Reine Marguerite*, meaning Queen Daisy; and afterwards in England, where it was called *China Aster*, which is China Star.

Since that time it has been very much improved, though the greatest improvement has been made in the last thirty years. The colored plates in Mrs. LOUDON'S *Flower Garden*, published in 1840, are very little better than drawings we have in our possession, made fifty years before. The Aster is now deservedly a general favorite, and we may safely say, that for an autumn display it has no superior among Annuals.

Give the Aster a deep, rich soil, and mulching with coarse manure is very beneficial, and if extra fine flowers are needed for exhibition or any other purpose, a little liquid manure occasionally will give the most gratifying results. Plants may be grown in the hot-bed, cold-frame, or a seed-bed in the garden, but to obtain good flowers the Aster plant must be strong and stocky. A plant that is what gardeners call "drawn" will never produce very fine flowers. A "drawn" plant is one that, by being crowded in the seed-bed, or some other cause, has become tall, slender and weak. The Aster transplants easily. Twelve inches apart is the proper distance for making a showy bed of the large varieties; the dwarf kinds may be set six inches or less. It is not best to have Asters flower too early in the season, and there need be no haste in starting seed in the spring, for the Aster is essentially a fall flower, and the flowers are always the largest and most perfect and enduring in the showery weather and cool, dewy nights of autumn. The tall varieties with large flowers need a little support, or during storms of wind and rain they are often blown down and their beauty destroyed when in full blossom. Set a stake in the ground near the main stem, so that its top is only about two-

thirds the height of the plant. Then fasten the main branches to this stake, not in the way too common, which is merely to pass a string around the whole plant, stake and all, thus injuring both foliage and flowers. The proper way is to attach several strings to the stake, so that they will not slip down, then pass each one around two or so of the main branches in a



kind of loop or sling, so that the plant will retain its natural position, and may be swayed by the wind without receiving the least injury. We have endeavored to show how this is done in the accompanying engraving. Asters are so very dissimilar in habit, ranging

from the little dwarf, scarcely six inches in height, to the stately plant of more than two feet, and bearing flowers almost as large as a *Pæony*, that a few words seem necessary to prevent persons purchasing what they do not desire.

The smallest of the family, the little *Dwarf Bouquet*, represented in the engraving, presents a bouquet of flowers about five or six inches in height, with scarcely a leaf. These are excellent for borders around beds. The *Dwarf Pyramidal Bouquet* makes plants from ten to twelve inches in height. Next in height is the *New Schiller*, about fifteen inches. It will be seen to be of very peculiar habit, the leaves being almost entirely at the base of the plant, and drooping. This is a beautiful variety when it comes true, but it has a bad habit of sometimes losing its character and looking like something else. Another class, like the *Imbrique Pompon* and *Tall Chrysanthemum*, grow from eighteen inches to two feet in height, while the tallest of the class, represented by the *New Rose* and others, range from twenty inches to two feet. The *New Rose* is of strong habit, the flowers are large, petals finely imbricated and of great substance. It is one of the very best sorts. The *New Victoria* produces magnificent flowers, of good size, and as perfect as can be desired. *Giant Pæony* is a hybrid between the old *Giant Emperor* and *Truffant's Perfection*, with very large flowers, only exceeded in size by the *New Washington*, which is the largest-flowered variety known. We have often gathered flowers more than five inches in diameter. The *New Crown* is a beautiful variety, and a favorite wherever known, the outer rows of petals being crimson, violet or blue, and the center pure white.

The passion for old-fashioned things has extended even to flowers, and a worthless variety with loose, ragged flowers, known as the *Original Chinese*, has received some attention.

GERANIUMS.

No flower is more generally and successfully cultivated than the *Geranium*. It is found in almost every garden and in every house where plants are cultivated, in every part of the civilized world. It is so easily grown, either from seeds or cuttings, will endure such hardships either of cold or heat or dust, that it must always be a special favorite with those who cultivate house plants; while the bright flowers of the scarlet varieties, and their endurance of chilly nights and scorching suns, render them the first of all our bedding plants for producing a mass of bright color, the variegated sorts are unsurpassed for edgings.

Some years since the floral world was pleased and somewhat surprised at the announcement of a double *Geranium*. It was not very good, but was the commencement of a new era in *Geranium* culture, and did much to increase the popularity of this favorite flower. Since that time very many double varieties have been introduced, and some of them of much merit.

Our colored plate shows some of the best double sorts, and a new, single, striped variety of great beauty.

Cannell's New Life is one of the latest and most remarkable of sports. A variety with its colors in stripes is a novelty, and this late acquisition is, no doubt, the beginning of a new class in this interesting family. The plant is dwarf in habit and a remarkably free bloomer; the bright scarlet color of the flowers is boldly striped and flaked with salmon, white and rose, like a carnation. We think *New Life* will attract much attention and be very generally admired.

Madam Amelia Baltet is the best double white we have yet seen. Though not quite so free a bloomer as some of the others, still, it is so much whiter that we give it the preference over all others.

Little Fred, the salmon pink, is one of our own seedlings, and we consider it very fine.

Madam Thibaut, the deep pink, is unequaled as a pot plant or bedder. The trusses are large and the flowers well open.

J. C. Rodbard is a grand flower, brilliant in color, with an immense truss of fine flowers.

All of these were painted from specimens grown on our own grounds, and are exact representations.

When the varieties of double *Geraniums* began to come out there were two faults, especially, that marred their beauty; the first was the inequality in size of the petals, and the second their disorderly and unsymmetrical arrangement. It will be noticed that in both

these respects there is great improvement, and it is what we are to expect from year to year as the propagation of new varieties goes on. Florists will never be satisfied until double *Geraniums* shall exhibit their outlines as well defined, and with their petals as uniform in size and as regularly imbricated as those of the best *Roses*. Old sorts will be constantly discarded and new ones brought out to replace them. In this way varieties become enormously multiplied, and it is absolutely necessary to throw out from time to time those that are superseded by more meritorious ones. The many florists constantly engaged in hybridizing and producing new varieties of all plants cause an immense supply; and it would be useless to call attention to them all, as many of them closely resemble each other. Our aim is to keep our readers apprised of all the best ones, of general interest to cultivators, or at least of those that show some marked improvement and advance over those already disseminated.

PEPPERS.

Our correspondent, "TERRA," who is one of the best of amateur gardeners, with a special liking for vegetable culture, has already given us needed information in the culture of *Carrots* and *Radishes*, while "SUFFOLK," who has grown vegetables on Long Island and in New Jersey, almost as long as we can remember, has told us a good deal about Cabbages. We design to let our correspondents tell all they know about the leading crops, and what they forget,



LARGE BELL.

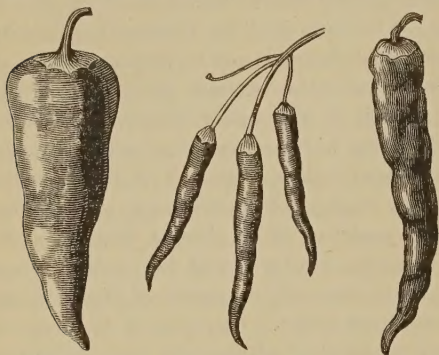
TOMATO-FORMED.

or think of too little importance, or somewhat beneath their dignity, we will describe, and thus fill up the little gaps and make perfect work. We are not at all proud, even if people should think, when our portrait is published, that we are not ill-looking.

There are Peppers, and Parsley and other sweet herbs, and a great many things, not one of which is very important in itself, perhaps, but which together add a good deal to the comfort and health of a family, and all of these we shall endeavor to notice if neglected by our

correspondents. At present we will introduce the *Peppers*.

Our common garden pepper is a native of India, and is known to botanists as *Capsicum annuum*. There are several varieties, varying in height of plant from one to more than two feet,



LONG RED.

CHILI.

CAYENNE.

while the smallest fruit is not much larger than a currant, and the largest will weigh several ounces. They differ also in form, some being round, others tomato-formed, and still others long and slender like a radish. The seed pods are the valuable part, and they are used in pickles and seasonings, and being hot and acrid, are thought, when used in moderate quantities, to promote digestion. But, doubtless, the ladies know more about their use than we can tell them. As the Pepper is a native of warm countries, in the north it will need all the advantages that can be given in the way of a warm soil and sheltered location. Those who have hot-beds sow the seeds early in April, in shallow drills, six inches apart, and transplant



CHERRY PEPPER.

to the open ground when warm weather comes. Set the plants from twelve to fifteen inches apart. Those who have not the advantage of a hot-bed must sow the seed in the open ground in May, in the warmest place that can be secured. Sow in drills less than an inch deep and a foot apart, and when the plants are young thin them out to a foot apart in the rows.

The principal varieties are the following:

The *Bell*, commonly known as Large Bell, is a favorite kind, not only on account of its large size, being four inches in length and three in diameter, but on account of the thickness of its flesh, and its mildness, for it is much less acrid than many other sorts.

The *Tomato-formed* is so called because it resembles that fruit in form. It is about two inches in length and three in diameter. Its flesh is also thick and mild.

The *Long Red* is a very beautiful fruit, four inches or more in length and only one in diameter, of a bright red. The flesh or skin is quite thin. It sometimes grows erect and sometimes pendulent, and is exceedingly piquant.

The *Cayenne* is slender, coral-red, and furnishes the Cayenne Pepper, of commerce. It



MONSTROUS.

SWEET MOUNTAIN.

will not often ripen at the north. It is a perennial.

The *Chili Pepper* is small, slender, and less than an inch in diameter. It is very pungent, and will seldom ripen at the north.

The *Cherry Pepper* though not so early as some of the large sorts, can, with a little care, be ripened at the north. It is the best one we can grow for pepper-sauce, as it is very hot. For this purpose the pods must be picked while green.

The *Sweet Mountain*, or *Mammoth*, is something like the Bell, but longer and usually larger every way. In quality it is the same.

Monstrous, or *Grossum*, a French variety, we believe, at least we obtained seeds from France. It is somewhat uneven, tapering towards the point, and very large—the largest we have ever grown. It is rather mild, flesh thick, of the character of the Bell.



MY EXPERIENCE WITH FLOWERS.

As you are the friend of all who cultivate flowers, and especially of those who love them, you will excuse me for troubling you with my story. I have had a very busy life and have had little time to spare, and in early life thought I had none for flowers; but I am thankful that about ten years ago you made me a present of a few flower seeds. I had never before had any flowers of my own, but loved to see them. As I had no yard except the general one that the pigs, horses and chickens could visit at their pleasure, I was at my wits' end to know how to grow them. Nothing troubled the yard before, for there was nothing to be destroyed. If I trusted those precious seeds to the tender mercies of cows and chickens, I knew there would be an end to all my hopes. There seemed to be no place in the house, as it was an old log cabin with one window, very small, the rest being only half windows. You can guess that my husband was something of a *California bachelor*, who thought most anything was good enough while he was making money to go back East and settle, after a few years. But about the flowers; I planted them in boxes, hung them on the outside of the cabin, and Oh! what flowers I had that summer, and the first I ever had.

Now I have a large house with an abundance of flowers in an extension of the dining room, which has six windows, five on the south-east and one on south, and a door from the kitchen lets in the steam from there. This, I think, is the secret of my success, for they look just like summer plants out of door. One box is handsome, and I will describe it. In the center is a Madeira in the shape of a cross; it is five feet high, and has such large leaves that I put a white Petunia in to run up among the leaves. At the foot is a little of everything, Fuchsias, Salvia, Geraniums, Strawberry vines, Nasturtiums and Ten Weeks Stock.

Will you please let me know what to do with a Poinsettia pulcherrima in the summer? Are Heliotropes hard to raise from seed, and do

they bloom the first year? Will it hurt Tulips to water the bed in the summer, that is, to grow other plants in the same bed?—MRS. M. S. P., *Susanville, Cal.*

Plant the Poinsettia in the open ground in the summer; plunge the pot deep in the earth. Heliotropes do not start very readily from seed by common treatment, but in California the Heliotrope flourishes so luxuriantly that we think you would have no trouble in growing them. Watering will not injure the Tulip bulbs. The effect in your climate will be the same as though your Tulips were growing in a section subject to frequent showers.

VERBENAS FROM SEED.

I would like to say through your MAGAZINE that you cannot too often repeat the well known fact to your many customers, that the best way to obtain good Verbenas is to raise them from seed. I will tell you of my somewhat novel plan of last season, and my success with one



VERBENA PLANT.

packet of mixed seed you sent me. I got about half a peck of rich loamy soil mixed with leaf mould and a little sand. With this soil I filled an old bread-baking tin and put it in the oven of the cooking stove for an hour or more, until it was baked through, thus destroying all insect life and seeds of weeds that may have been in the soil. I then crushed it fine on a floor with a mason's trowel, then put it into a round tin pan about three inches deep and ten inches in diameter, filling it within three-fourths of an inch of the rim and pressing it down smooth. Then I sowed the seed thinly but regularly all over the soil, after which I sifted a little of the soil through a fine sieve over the seeds, covering them about one-third of an inch deep. I then

got a brush and water with the chill taken out, and sprinkled the soil well to below the depth of the seed, put a large pane of glass over the top of the pan, to keep the soil damp, and put it away in a warm corner of a shelf in the kitchen. This was about the middle or third week in February.

In about two weeks the seeds began to germinate, and as they came up, one after another, I brought them forward to the window shelf, giving them air on mild days. In about four weeks after this I put them outside on a shelf when the weather began to get warmer, giving them the benefit of the sunshine and open air in the daytime; by this means they grew bushy and strong by the usual time for planting out in the garden. I planted them in a round bed about four or five feet in diameter, a little raised



VERBENA FLOWER.

in the middle and with a border of your little Dwarf Bouquet Asters. A prettier bed of flowers it would be difficult to find, and best of all, the Verbenas were two-thirds of them sweet scented. I think this plan of raising Verbenas from seed prevents, in a measure, the damping off of the seedlings so common in early sown seeds.

A very few plants raised in this way, and properly trained, will cover a large bed with beautiful flowers. I know they can be grown in the hot-bed in the ordinary way, or in the open border later, with care, but having good success the past season, I think I shall adopt the same plan this year also. I find that to be successful in raising good flowers from seed

three things are absolutely necessary, namely: judgment, patience and perseverance. The first can be obtained by reading your publications on the subject; the other two will follow, according to the determination to succeed and the love of the object sought for. Will Verbena seed a year old last fall, grow as well as last fall's seed?—L. O., *Newburgh, N. Y.*

Old Verbena seed is not reliable; generally worthless after the first season. Light colored Verbenas grown from seed are almost always fragrant. You will also find cuttings from seedlings more healthy than those from old named plants.

FRUITS IN NORTH MISSISSIPPI.

As fruits follow flowers, Mr. VICK, I am sure you will not exclude the latter from your MAGAZINE, but rather give them an honored place, surrounded by your choicest blossoms; for nothing gratifies one's whole array of senses and faculty of ideality like a combination such as Nature gives a pattern of on an *Orange* tree. Our fruit year begins in May with Strawberries, Raspberries, Dewberries, Gooseberries and Blackberries. The Dewberries and Blackberries are a spontaneous growth along old fence rows, about springs, and the moist edges of thickets. We raise very large and luscious Strawberries and Raspberries, finding clean culture best for the former. The Mulberry grows wild and is not much esteemed, notwithstanding poets have sung it, and scholars have lauded it, since PYRAMUS and THISBE, the Babylonian lovers, empurpled its blossoms with their blood. It is thought we could have silkworms here and make silk, but nobody tries, having their hands full with efforts to make cotton, which they know more about.

Of the stone-fruits we have the Cherry, Apricot, Plum, Nectarine and Peach. The Cherry is easily propagated by budding and grafting, and I would especially recommend the "May-duke" for pies and preserves. The Nectarine is only a smooth-skinned Peach;—the Apricot half Plum and half Peach and altogether beautiful, shining like a Lemon among its dark green leaves. Nearly every farmer in North Mississippi who owns an "old field" is blessed with a spontaneous Plum orchard. The large yellow Plums are exceedingly agreeable in flavor, and the trees easy to climb. Of the cultivated sorts the "Green Gage" is considered the standard of excellence. The "Damson" is highly esteemed when preserved; it also makes a very palatable prune. The wild fall Plum or hog Plum of our woods makes delicious jelly.

Of the pomaceous order of fruits we have Apples, Pears, Quinces, and Medlars or Persimmons. Of these, and indeed of all other fruits, the Apple takes precedence for value, as

being most nutritious, keeping better, and best bearing transportation for marketing purposes. I have known Apples to keep all winter in this country by simply placing them in boxes, with layers of paper between and around them; another way of keeping them is to bury them in shallow pits, covering them heavily with earth. It is said that by removing the blossoms on one-half of an Apple tree in the *bearing* year there will be fruit on that half the odd year. Pears picked green ripen deliciously put away in bureau or table drawers, or in chests of linen. Quince is only fit to eat when cooked, but deserves a place in every garden for its exquisite flavor. Our native Persimmon, when perfectly ripe, after frost, melts in the mouth like a Plum. Our old colored "mammas" are great hands to make "Persimmon beer," which is really a very palatable beverage taken with a well-baked Sweet Potato and a bit of fat, nicely browned "possum."

Melons constitute a very important item in our bill of summer fruits. Watermelons, Muskmelons, Cantalopes and Nutmeg Melons are all abundant and delicious here. Grapes, both wild and cultivated, abound. Of the latter we have the Scuppernong, the Isabella, the Catawba and the Thomas. Muscadines and fox Grapes are plentiful in the woods. A very important fruit with the farmers of North Mississippi is the Chinese Sugar-cane, from which they make their supplies of "Sorghum" molasses.

Of nuts we have Walnuts, Chestnuts, Hickory-nuts and "Scaly barks." Goobers, Pinders or ground Peas are raised in patches with very little labor, and when parched are nice and wholesome.—V. D. C., *Hernando, Miss.*

CHINESE PRIMROSE.

You will do well to keep on urging upon those of your subscribers who desire flowers in winter and have hitherto failed, or to those who wish a variety, the merits of the Chinese Primrose. I, with my limited convenience, cannot make sure of any of the so-called winter-blooming plants blossoming; but last spring I obtained a paper of Primrose seed, (single fringed,) and succeeded in getting thirteen plants, with no convenience but a common flower pot, a light of glass and the kitchen mantel heat, and might probably have had more, but, never having seen the seedlings, and seeing something sprouting up, I removed them from their warm position, as I afterwards discovered, before the Primroses sprouted. I kept three plants myself—two are in blossom and the other budded—and the others I gave to friends. I kept mine in the north window of a bedroom off the kitchen.—R. E. L., *Jefferson Co., N. Y.*

POOR FRUIT.

There is something I will not do, even for money. I never would or did grow poor fruit, nor would I ever become a quack doctor. Last April I was at Anna, on the Illinois Central railroad, in the southern part of that State, and while I was pruning some trees belonging to the railroad, with a pair of Waters's long pruning shears, I was startled by an Irishman singing out, "There, that's the idlemans' knife!" Thinking he was making fun, I replied, "Shure an' ye's would na be after having a man break his neck to climb trees to cut them, wad ye?" "Oh, me honey, that thing is the very thing I have been looking for for a long toime." As he stayed at the same hotel that night I had some conversation with him, for the station agent informed me he got more money for his fruit than any one in the district. I wished to know why, when I found my friend, H. Dowel, was not quite the fool that I thought him at first. He had ten acres of apples, and, he said, "I goes around wid a long pole and just smash off most of my fruit before it gets big, but I smash off good as well as bad, and when I saw your thing to-day I thought that was the very thing I wanted in my fruit trees, so that I could select my fruit better than with a pole. My neighbors all think me foolish for destroying so much fruit, but, yer sees, I don't have so much to carry to market, an' I brings home more money than they do." And all his neighbors confirm this important fact.

Anybody can grow poor fruit, no matter how selfish or lazy he may be, but a very little sacrifice of indolence and selfishness will grow fruit that is fit for the proverbial Prince. In my rambles among the fruit districts of southern Illinois last spring, I saw on every hand fruit orchards with the trees almost literally breaking down with the fruit, and everybody seemed to think it was *au fait* to let them be so. If I could have commanded the owners I would have said, "Now, you just go to work and take off at least one-half of that fruit, and you will not only make the rest better but give the tree a better chance for the future." For many years I made it a practice to thin out all my fruit as soon as convenient after it was set, and to keep thinning until it was ripe. I invariably cut off poor bunches of Grapes before the flowers open, and thinned out the berries repeatedly until they began to change color. I always had fine fruit and a crop every year, with no off years. People who will persist in letting fruit trees, bushes or vines bear all they will some years, must expect they'll have poor fruit, and seasons of extra rest.—AN OLD GARDENER.

EUPHORBIA.

MR. JAMES VICK:—Your MAGAZINE is the oracle we consult on all matters concerning our flowers, so when it fails us, we turn to its originator. I send with this letter a small box, marked with my name, containing a diminutive flower, which I will be very much obliged to you if you will name. It has been open for two weeks, and does not yet show any signs of wilting. The plant is about eighteen inches high, very straggling, and the branches a mass of thorns, from one-half to an inch long and very sharp. When I severed the flower a thick,



EUPHORBIA SPLENDENS.

milky substance exuded and immediately coagulated. The color is about the same as *Pyrus japonica*, or Japan Quince, as I have heard it called. The leaves are long and narrow and come from between the thorns. I have very little experience with plants, but I think this must be of the Cactus family.

I have a small conservatory south of and heated from the parlor, but, with few exceptions, "Nothing but leaves my spirit grieves." My



EUPHORBIA JACQUINIIFLORA.

Heliotrope and *Mignonette*, and even *Sweet Alyssum* is nothing but foliage. The buds have all dropped from my *Scarlet Abutilon*, and a

Cobea, from which I expected lovely flowers, has covered a wall, or space, twelve feet high and six feet wide, but no flowers. I have lovely *Nasturtiums*, *Callas*, *Japonicas*, (five now in full, snowy flower), and the feathery flowers of *Crimson Achyranthus*. But *Roses* fail me, also am troubled with the horrid scale bug on both this and the yellow. I have used carbolic soap and scraped them off, and still they come. My note is already too long, but please pardon. A woman's pen, you know, like her tongue, never wants to stop.—MRS. H. W. B., *Georgetown, D. C.*

The flower sent us by our correspondent is *Euphorbia splendens*, of which we give an illustration.

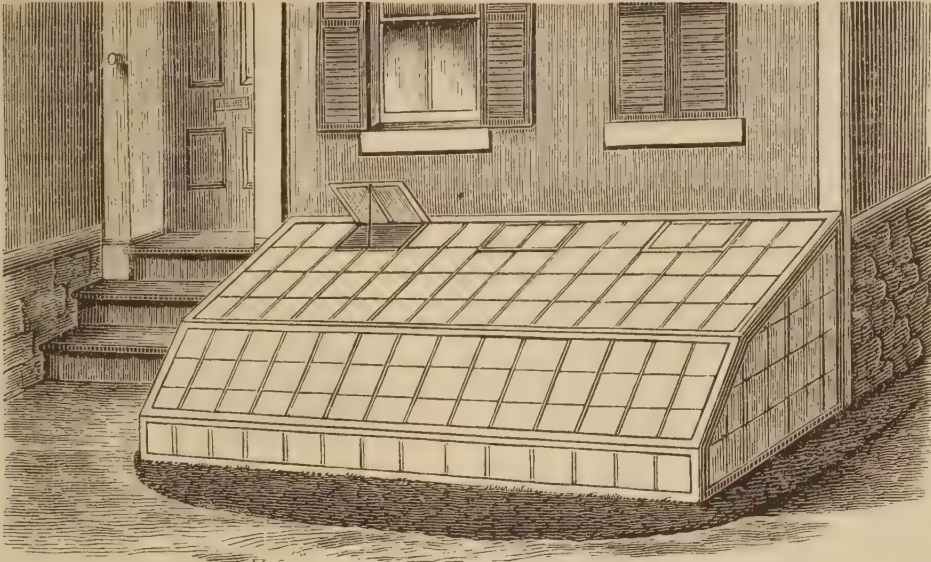
The same week we received a flower of still another variety, *E. jacquiniiflora*, which we also show. The latter is the more showy of the two, and is a very desirable plant for winter-blooming in the house. After the first blooms are gone, cut the plant back, this will cause a new growth, which will flower later in the season. In the spring cut back to within six inches of the pot, repot in fresh soil, and plunge in the open border. In the autumn repot and bring into the house, giving it a warm place, and, when the flower buds show, keep them as near the glass as possible. Do not let the soil become sodden by over-watering. The flowers are intense orange-scarlet.

We can give no reason for the dropping of the *Abutilon* buds, or the *Heliotrope* and *Mignonette* not blooming, unless it be that the conservatory is too warm and dry. We cannot grow everything under like conditions, and where we can bloom *Callas*, *Camellias*, and "lovely *Nasturtiums*," we should not feel very unhappy.

CONSERVATORY.

MR. VICK:—I have been a student in floriculture for a long time, taking my lessons from JAMES VICK. In pursuing my studies in your MONTHLY MAGAZINE, and your other works, I find that you seem to be always ready, in behalf of your patrons, to hear of any new or novel idea for the growing of flowers and green-house plants. I think I have something that you will be pleased to lay before the subscribers of the MONTHLY MAGAZINE.

I herewith enclose two plans (one outside and one inside,) of a structure I have operated for some years, and with excellent success. It is the only thing of the kind I ever heard of. One of its best points is, that after the first cost of building it is worked without one cent expense for heating, as may be seen by the inside plan. I made a sitting room in the basement of my house; I took out the whole front foundation wall as low down as the window sill, and built a glass structure as shown in the outside plan, throwing the sitting room and glass house into one room, all of which is heated by a single parlor stove. The conservatory, (see inside plan,) is not as low as the sitting room floor; I took out but one foot of earth, thereby bringing the plants up where the ascending heat of the



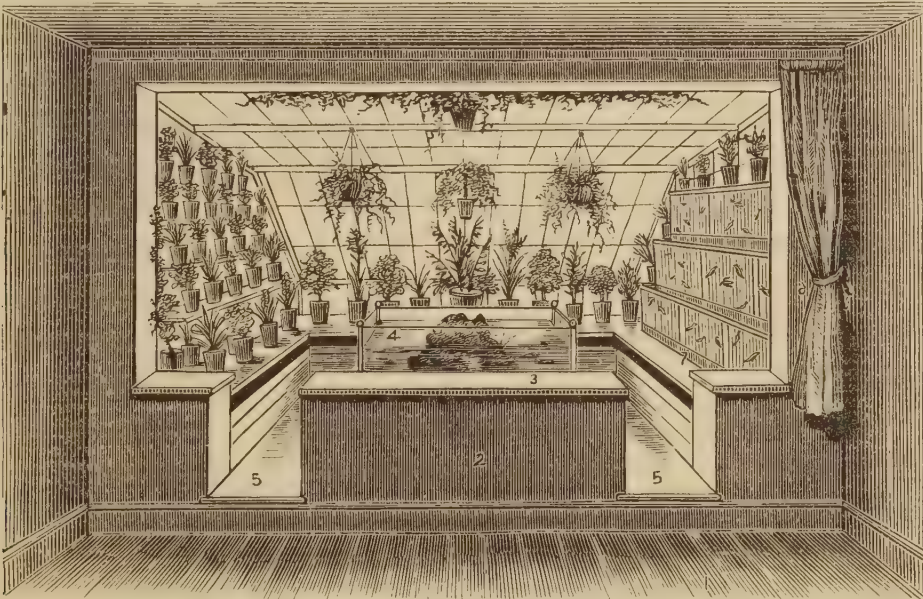
CONSERVATORY. OUTSIDE PLAN.

room meets them. I grow hot (not stove) or cold natured plants by placing high up or low down, securing moisture by using the hose. And I grow them so well that lovers of flowers often compliment me by saying, "Well, they can't beat you," and florists have come to me for sample plants.

The ground enclosed measures twelve by fifteen feet, with a capacity for three hundred six-inch pots. I first built to hold eight hund-

Now, Mr. VICK, I hope I have not been tedious, and my only excuse for sending this is that I have thought for a long time that this plan is just what you would like to lay before the readers of your MAGAZINE, and amateur lovers of the beautiful.—G. S. M., *Charlestown, Mass.*

In making these views we have purposely left out the doors to passage ways, and also an array of plants on old window sill, (fig. 3,) in order to show the interior arrangement more clearly. By referring to the follow-



CONSERVATORY. INSIDE PLAN.

red pots, but that proved to be too many for my stove; I then reduced the number to five hundred pots; but I could not say much in favor of my plants, so I again reduced the number, this time to three hundred pots, and this has proved a success for several seasons.

ing figures the whole arrangement will be clearly understood:—

1. Basement sitting room. 2. Part of foundation wall to house. 3. Original window sill, good for pot plants, &c. 4. Aquarium with fifty fish in variety. 5. Passage ways dug out of solid earth. 6. Curtain, for a screen when desired. 7. Aviary of fifty canaries.

TWO GOOD CLIMBERS.

I wish to call your attention to two very excellent Perennial Climbers, one of them a native, but none the less desirable on this account, for is not our Virginia Creeper, whose claims you have advocated so admirably, and which I understand is very extensively grown in Europe for ornamental purposes, also a native. I rarely read an English book describing country life—not even a novel—but allusion is made to our Virginia Creeper. The first one to which I wish to call your attention is

THE WOOD FRINGE,

its true botanical name being *Adlumia cirrhosa*. It is also known as the Alleghany Vine. It is not really perennial, but is so practically. It is



a biennial, comes up from seed and makes good plants the first year, but does not climb or flower; the second year it will run from twelve to twenty feet and make an



ADLUMIA—PLANT AND FLOWER.

elegant screen. The leaves are of a delicate pale green and finely cut, or more correctly speaking, after the manner of the books, triply pinnate. The twining foot-stalks act as tendrils and cling tenaciously to anything within their reach. The flowers are small, flesh-colored, and though not individually conspicuous, are produced in small clusters and great abundance.

I observed that it was practically a perennial, and so it is with me, in this way. It seeds most abundantly, and these are dropped upon the ground when ripe, producing plenty of young plants, so that I have had a constant succession in the same way for more than eight years; not one year have my vines failed. My location is the north side of a house, and I do not know whether any other would be better or worse, but am quite satisfied as it is.

The other climber to which I referred is a true perennial, and one which will struggle through and against the worst difficulties and thrive, though I have no respect for any one who would treat it badly. I refer to that glorious plant,

THE PERENNIAL PEA.

Some five years since I obtained a few roots, having the year before tried in vain to make seed grow. I have since, however, succeeded

very well. Those roots I planted near a small summer-house and the first year had plants four feet in height and some good clusters of flowers. Next year, by a little training, my plants reached up six feet or more, and were very handsome.



PLANT FIRST YEAR FROM ROOT.

The flowers look like those of the Sweet Pea, but are in larger clusters and the flowers more compact on the stem, producing no fragrance. Having raised some plants from seeds since, and the original roots having increased, I have now plenty, and so have planted them in many



FLOWER AND LEAF—HALF SIZE.

unoccupied corners and places, where they grow and bloom abundantly. They keep in bloom a very long time and furnish a great many cut flowers.

There is a white variety, but I have never had it. Mine are pink and red. If your readers obtain this desirable plant they will never regret it, I think.—ILLINOISAN.

ROSES CHANGING COLOR.—We have several reports of Roses changing color: for instance, an Ithaca lady has a Rose of a rosy white color last year, while before it had borne yellow flowers, and a neighbor had a white Rose bush of previous years bear yellow flowers last season.

THE CLEMATIS.

MR. VICK:—I enclose a photograph taken two years ago of a Clematis in my garden. It is, I think, *azurea grandiflora*, and was, when photographed, four years old. In the early summer it is a magnificent sight, and a great many people from the town come up to see it and several others I have. It seems odd that with so many gardens as Schenectady possesses no one has any of these beautiful Clematis. However, they are just now introducing them. I also have a *Clematis graveolens* which is a wonderful sight. Spring before last I planted it by an iron rod ten feet high. It was itself about two inches high and very feeble-looking.



It grew into a column twelve feet high and three feet broad by August, and was a mass of yellow blossoms, and then, of the most exquisite, long-haired, silvery seed pods until hard frost. It lived through the winter, to its extreme tips, and grew so furiously, shading such an important part of my garden, which is not too large, that I had to move it this last fall, cutting it back severely. It seeds profusely, and the seedlings will grow eight or ten feet in a season. The bees love it so, especially the big, brown, velvet "bumble bees," that the whole large plant seems in motion as they dive in and out among the flowers.

My little plant-room, which I heat with a small kerosene stove, is flourishing. I always keep a broad pan of water on the stove, and the air is delightfully moist. The Charles Hauser Geranium received with my last plants is blooming superbly. How beautiful it is!

The snow is a good thing for my garden, which is covered with it knee deep.—MRS. A. D. P., *Schenectady, N. Y.*

The Clematis is only just beginning to receive the attention it deserves; indeed, we have only recently learned that the choice varieties could endure the winter of New York and the other Northern States. The ladies of Schenectady, we are sure, will not be far behind their neighbor in the culture of this beautiful Climber.

LETTER FROM OREGON.

MR. VICK:—I am highly delighted with your beautiful and instructive MAGAZINE, and think the absence of the everlasting and bewildering cooking recipes is by no means the least of its charms. Surely the ladies should be profoundly grateful to you for that happy omission. I see that some have named their pet dogs, calves and children for you, and others have dubbed you doctor. Now, I don't see how that comes in unless you doctor people's morals and manners.

Last spring I planted bulbs of *Oxalis Deppei* and *lasiantha* ignorantly, only a few straggling leaves and blossoms came to remind me of my miserable failure. As I had read that all bulbs required deep planting I suppose I overdid the matter and planted too deep. Perhaps, sometime, you will tell me more about the Oxalis. I notice one of your correspondents on Lily culture says *never* put any manure in soil for Lilies, while another says, *be sure* and dig in plenty of it. Now, doctor, do hurry and give us your opinion and end the suspense.

You advise taking up and storing Dahlias, Gladiolus and Tritomas as tender, but I know of a lady here who leaves the first and last in the ground safely all the time, with a slight protection of rubbish in winter. Please give us some information about hardy shrubs and low, or small-growing evergreen shrubs and plants. What a pity there are so few evergreen vines.

Please do say a good word for the Snapdragon, or Antirrhinum. I never knew it to get half the credit or praise it deserves. I have had them bloom from May to November, though to secure that result they should have rich soil, plenty of water, and partial shade in hot weather, and the seed pods should be constantly picked off; what, then, can surpass it for beauty of foliage and variety and duration of flowers, and for hardiness?

Hollyhocks, Rockets and Wallflowers are called biennials, but they are perennial here, for I have known them to bloom three seasons, and seem then to be getting ready for another. I have a curious and beautiful plant, called the Tallow Plant, which I do not find described in your Catalogue, unless it is the Candle Plant,

and I hardly think it is. It has large, succulent stems, with thick, shiny, green leaves, about two inches long and shaped something like a paddle; stems light green, and it is said not to bloom. I would be glad to know the proper name and something of its culture.—Mrs. E. B., *Sheridan, Oregon.*

Our correspondent, by applying to us the professional appellation that she does, removes quite a load of responsibility from our shoulders, for, *when doctors disagree who shall decide?* As to the Lilies, we fear only her own experience will satisfy her on the point of the use of manures. Our own opinion is that a poor soil would be much benefited by the application to it of well-rotted barnyard manure. Fresh, or unrotted, manure we believe to be objectionable to Lilies. Of course, too, there is a difference in soils. Some new places recently cleared from the forest, and rich, prairie soils, will not need manure of any kind. Experience has taught us that *Lilium auratum* and all the California Lilies, excepting *L. pardalinum*, are particularly sensitive to manure, and a direct application of it to the soil is injurious to them. These varieties of Lilies we always plant in soil that is already rich and in fine tilth.

The Tallow Plant referred to is, no doubt, the same as the Candle Plant, *Cacalia glauca*.

The Antirrhinum, or Snapdragon, is a valuable plant, and we are glad our correspondent has called attention to its merits. In the next number we will give it some attention. If our readers all lived on the shores of the Pacific we would not advise them to take up *Gladiolus* and *Tritomas*.

AGERATUM.

MR. VICK:—For so many uses small flowers are not only desirable but indispensable, that I was pleased to have my favorite MAGAZINE call attention to this fact, and also to point out few of the more easily grown kinds, such as the Candytuft, Sweet Alyssum, &c. Please allow me to introduce a little favorite of mine, which, though it cannot boast much in the way of show, and is often lost sight of among the more ambitious inhabitants of the garden, is never passed by when selecting flowers for a little bouquet, or for button-hole flowers. The flower I allude to is the *Ageratum*.

This flower blooms most abundantly, and a long time, in fact, all the summer, and I have very few flowers that work up to better advantage in nearly all small floral work. There are two varieties—white, and a delicate light-blue, almost a lavender. The flowers, I might say, are brush-like and globular, and will keep in a bouquet or in water longer than any flower I am acquainted with. I have kept them in good condition after cutting for more than a week.

Sometimes I start the seed under glass in the early spring, and along in May transplant to the flowering beds, of course waiting until the weather is quite mild. I always take up a few plants in October and pot for the house. For this purpose I select a few of the more backward plants and pick off most of the buds during the summer. Sometimes, if I have no

plants that seem in good condition for this purpose, I sow a few seeds in August to grow plants for winter-flowering. Last season I had



no hot-bed, so I selected a warm, sheltered spot in the garden and sowed the seed, covering them but slightly, and had very good success.—ELLEN, *Wayne Co., N. Y.*

The *Ageratum* is well described by our correspondent. Its name has reference to the long-continued flowering of the plant, and the endurance of the flowers after gathering, and means *ever-young*.

THE DAHLIA.

MR. VICK:—The ill success of cultivators of the Dahlia in producing flowers is due far more to *soil* than to season. I started in, several years ago, with a fine assorted list; and, like all good gardeners, believing in the virtue of soil richness, made my Dahlia beds especially warm, light and succulent with old manure. The result was a tremendous stock growth—too large for the stakes—but very poor flowers, half opened and small. I was, of course, disgusted, and the next season, in sheer disgust, had the bulbs set in a heavy, poor clay soil. Result:—small stock growth and the finest blooms I ever saw.

The Dahlia is called a *gross feeder*, but it is not. It loves moisture rather than rich elemental food. In clay it finds the best constituents of its development—moisture, silex, lime and alumina. So we say to those who love this queenly flower, if you would see the queen in all her glory, plant in a comparatively heavy soil, no manure, reduce the stalks to *one* for each set, set the stakes firmly to keep the stalks from swaying, and, if the season is dry, give the bulbs a *soaking* with water every evening during the drouth. My word for it, you will then be proud of your success.—SILVER GREY, "*The Terraces*," *Hohokus, N. J.*



THE BEECH FORESTS OF DENMARK.

The environs of Copenhagen are eminently beautiful and attractive. A short distance by rail from the outskirts commence the magnificent beech forests of Klampenborg. These beech woods are the most remarkable feature of Denmark. They clothe the whole face of the country, except the cultivated parts, giving it a soft, rich, languid look exceedingly pleasing to the eye of one accustomed to the bleak hills and pine woods of the Scottish Highlands.

Nothing can be more delightful than a ramble among the beech woods in the neighborhood of Copenhagen on a hot summer day. The shadows are so cool and deep; the belts of golden light that lie across the greensward at every opening among the trees are so bright and sunny; the far-stretching vistas so mysterious and seductive to the imagination, and the trunks and branches of the beeches so smooth, round and well-filled, and so covered with heavy masses of beautiful transparent foliage, that you feel as if in an enchanted place. From a rising ground, through a break in the forest, you catch a glimpse of the blue waters of the Sound flashing in the sunlight, with white, spirit-like sails flitting to and fro over its placid bosom; you thus feel that the place is haunted forever by harmonies of winds and waves—visited by delicate influences from sea and land. Occasionally, at the end of a vista among the trees, a solitary deer may be seen feeding, or pausing to gaze at the stranger, and gliding silently as a shadow into the remote recesses. The ground is everywhere enameled with the wild flowers which we see in our own land. In this primitive country almost every plant is known to the peasant, and associated with some quaint incident. I was greatly struck with the beauty of the lichens, mosses and fungi, which grew upon the trunks of the trees, and especially upon the fallen ones in moist and shady spots. I observed in moist, rocky dells among the moss great quantities of the *Primula farinosa*. In early May the market women come into town bringing basket-

loads of this lovely flower tied up in little nose-gays. The glens of Lingby and Ramlosa are covered with it in spring. Many spots in the neighborhood of Copenhagen in this delicious season are like the Vale of Tempe. Indeed, at any time, nothing could be more soothing to ruffled nerves than the serenity and loveliness of Danish scenery. Doctors should send their patients, jaded and excited by the hurry and overwork of our large towns, to these peaceful, drowsy retreats, where the very spirit of repose has made its home, and the mere fact of existence is delight.

Denmark is indeed a land where it seems always afternoon, and the lotus-eater can wander day after day among its beech woods and never grow weary of the monotony.—REV. H. MACMILLAN.

THE PACIFIC WORLD.

We do not mean a peaceable world, but the great countries washed by the waters of the Pacific ocean. We hear much of the love of native land, but we never heard stronger expressions of love of country and home than from those who made comparatively new homes in California, Australia and other countries on the Pacific ocean. Many were the inquiries we made to ascertain the cause of this wonderful attachment, and without very satisfactory results, for everything was praised—climate, soil, people, and even the atmosphere. Six days were we traveling in company with a party of Australians, and if that country was not entirely perfect—quite a paradise on earth—these people had never made the discovery. The editor of the *Chicago Times* thus reports information gathered from Australia:

“Australia is a wonderful land. A strange and wonderful country. It is unlike any other. They have a climate that is as near perfection as can be asked—balmy, bracing and never severe. Antarctic snows fall on the southern extremes, and the north is warm. New Zealand is a wonderland. As you sail toward it there rises before you a black, and to all ap-

pearances, an unbroken wall of stone. It is a volcanic island, and the coast is very rough and dangerous. Yet Auckland has the most beautiful harbor my eyes have ever rested upon. The vegetation is very strange and beautiful. I have seen fern trees twenty and twenty-five feet high, with magnificent fronds. The fern growth is marvelously luxuriant. There are about a hundred and fifty varieties, and some of them the oddest shapes imaginable. One kind, with a delicate lavender leaf is singularly handsome. There appears to be no bottom to the soil either of the island or the continent. I have seen soil—black muck soil—twenty feet deep, and they told me that up the country there were many immense ‘downs’ where twenty-five feet was the average. It is impossible to over-calculate the productive capacity of such ground as that. The great drawback to agriculture is the recurrence of a yearly drouth. They are beginning to overcome this by means of artesian wells and the diversion of water courses. It is a strange, and in some respects a wierd land. The gum trees give a queer and ‘creepy’ look to every wood scene. Their limbs are gnarled and twisted in a way you can’t disassociate from an idea of pain; their foliage is scant, and the white bark stares through it like bare arms. The birds are nearly all songless, though they have the most brilliant plumage. Most of them are quiet all day, but as soon as night falls the woods are ringing with their harsh, discordant cries. In fact, the continent is in many respects what you might call a looking-glass country—for everything seems to be reversed in it. The north is warm, the south is cold; day is quiet and night full of life; the vegetable smallest here is largest there, and they have a bird without wings, and four-footed animals with beaks. But the humans are right-end up and wide awake, and unless I am much mistaken they will make a country of it that the world will be surprized at.”

A PEEP INTO A PARIS FLOWER SHOP.

On a dull, wet evening, (October 31st, last year) I wandered into a flower shop not far from the Madelaine, my friend H., an enthusiast about flowers, wanting to purchase a Tree Carnation which had attracted his notice the day before. H., with the caution of a true Englishman, is of opinion that foreigners, Parisians in particular, invariably ask nearly double the proper price for their wares, and that it is a duty to himself and his traveling countrymen to beat down these shopkeepers to what he thinks the right sum. Although he speaks of this as a stern duty, I think it is not an unpleasant one, and that he rather enjoys

the process. The little shop itself was quite a picture; it was a bower of Palms, Ferns and plants in bloom. Pots of white Lilac, Roses, Pinks and Carnations, shed a delightful perfume. Two or three girls were occupied in making bouquets and garlands, while the presiding deity, a stout, middle-aged woman, with a good-natured face, waited on customers, at the same time superintending the workers. While H. was bargaining with her for his Carnation I watched the packing of a large box, which contained a cross, a wreath, and a cushion of flowers. The last, about eight inches long and six inches wide, was composed of double Neapolitan Violets, with here and there a white Rose bud. The cross, which was about two feet long, was made of white Roses and Carnations, with a delicate edging of Myrtle sprigs; the wreath was of the same flowers, mixed with knots of Violets. The packer was placing these most carefully in a deep box, and arranging them with thin laths, so that they were perfectly firm and did not touch each other. “What are you going to do with these lovely flowers?” I inquired. “Monsieur, they are to be sent off to Rheims to-night to Madame de F. We received particular orders that they should be there early to-morrow morning. She lost an only daughter about this time last year; she was but eighteen, and we were to make the cross and wreath of white blooms, but these Violets were so fine that we thought a few bunches could not be amiss. What does Monsieur think?” “*Allez vite Nicole, tu seras en retard;*” anxiously exclaimed the mistress, who had been bestowing a somewhat divided attention on H.’s wants. “The price,” she said, turning to me, “of the wreath, cross and cushion, is seventy-five francs. Are they not lovely?” I answered truly that I had never seen any arrangement of flowers before that pleased me so much. “These,” she continued, will be placed on the grave of Mdle. de F. early to-morrow; perhaps Monsieur, though an Englishman, will remember that we decorate our graves for the Toussaint! We have been sending out wreaths and crosses all day, but none so lovely as these.” I could not help remembering the burial scene in Cymbeline, when the two brothers are bearing the disguised Imogen to her rest:

“With fairest flowers,
Whilst summer lasts, and I live here,
I’ll sweeten thy sad grave; Fidele, thou shalt not lack
The flower that’s like thy face, pale Primrose, nor
The azured Harebell, like thy veins; no, nor
The leaf of Eglantine;
Yea! and furred Moss besides, when flowers are none,
To winter ground thy corse.

W. N., in *London Garden*.

FROM AUSTRALIA.

MR. JAMES VICK :—Through the kindness of dear "American Cousins," of Racine, a copy of your FLORAL GUIDE for 1877 has come into our hands, and reading through its very interesting and instructive pages I found that some one had been bold enough to "shake hands across the sea" from New Zealand, and this gave me confidence to establish a conversational "wire" with you, as an Irishman might say, "by letter." We, that is, self and (a great deal) better half, have been much pleased with the tone and edifying character of your little work. The better half referred to is the gardener par excellence of this little establishment and I am really only her amanuensis on this occasion. I am going to give you a little insight into Australia in a floricultural sense. Climatically these colonies are an open-air conservatory, the frosts, save on the very highest ridges, being very slight, or at any rate not severe and continuous enough to destroy vegetable vitality, and for ten months the most delicate plants are safe in the open air. Our indigenous flora is peculiar; singularly enough, although beautiful in design and tint, it is wanting in the real charm of most of our popular flowers, scent. I have no doubt some of the bush flowers subjected to a course of educational treatment might develop into something good. I shall send you some seeds, and you can start a school for Australian seeds and plants.

As a people we are exceedingly fond of flowers—the majority try to "raise" something, from a Pansy to a Sunflower, on a quarter-acre patch or in a broken tea cup; and only last Saturday evening I saw an instance that the young Australian inherits the old country love of flowers by seeing three youngsters (of ages ranging from ten to twelve years) sailing into Knight Brothers' (our florists in particular) and purchasing a four-cent bouquet for their respective button-holes, and having had them pinned in, on the most approved principles, they sallied out as proud as peacocks. We don't stand taxation anyway easy, and are truly British in exercising the national privilege of growling, but we bear from year to year without grumbling the expenditure of very considerable sums in parks and ornamental gardens. Each borough or local government has its Botanical Garden, where all may walk and enjoy Nature's choicest works. I could be almost eloquent on the subject of flowers and their harmonizing, aye, elevating tendencies, but abler pens have pretty much exhausted the subject. It would be fruitless to attempt to select anything particular as the most splendid here; I have seen splendid Camellias, Fuschias varied in foliage and bloom;

we have some *Convolvulus* of splendid size and very dark blue color. In Pansies one gentleman, J. W. BAKEWELL, takes and maintains the lead; some very dark, like your King, of the Blacks, I should think, and some prettily smutted or clouded. Our *Geraniums* grow almost wild. We have, also, very grand flower shows, and there is much pleasant rivalry among the competitors, professional and amateur, and I trust to find this feeling rather increasing than decreasing throughout the world, although I am not Utopian enough to look forward to seeing "all mankind bound together by one rosy wreath," yet, in the most beautiful things of nature—flowers—all have a common interest, as something which develops taste, tones, softens and beautifies all with which they are associated, and all should aid and encourage the taste for the bright and beautiful.

There is also another and very important feature beyond the mere sentimental or æsthetic one, viz., the hygienic aspect, and the medical faculty very generally give in their adherence to the idea that the presence of flowers in the abodes of mankind generally has a beneficial effect, not only because they are "pretty and sweet-smelling," but because it has been distinctly proved that they shed ozone and absorb injurious floating germs of disease which would otherwise probably find a "selection" in the human system. It may not be generally known, but the presence of living vegetation will considerably retard the operation of natural decay in meat. An acquaintance of mine, a butcher, has tried it and, he says, satisfactorily. His shop looks like a conservatory on a small scale, and it is certain that there are less flies than in ordinary meat-shops, and the generally repulsive aspect of the butcher's shop is much abated.

In horticulture we grow almost anything with reasonable care and irrigation, a *sine qua non* in this dry and thirsty land. Vegetables generally do well, but the melon tribe thrive admirably. I shall be happy to procure and forward any seeds you may desire.—S. W. VINEY, *Victoria, Australia.*

COLD WEATHER.—The foreign papers, and letters from abroad everywhere, speak of unusually cold weather this winter. In the neighborhood of Bristol, England, only six above zero—the coldest known in twenty years. The Thames river, full of blocks of ice, almost totally arresting navigation. In Ireland much injury has been done to plants in greenhouses, not prepared for such severe frosts—the worst known in a quarter of a century. It is supposed much injury has been done to plants usually hardy.



SPECIAL TREATMENT OF PLANTS.

You are so patient with the ignorance of inexperienced floriculturists, that you will perhaps kindly answer a few questions on points which may be of interest to others of your subscribers besides myself.

1. What is the proper treatment of a plant which has been touched by frost? In country houses, exposed on all four sides, this accident will sometimes happen in spite of furnaces.

2. What is the explanation of the necessity insisted upon in all gardening books, of taking up, drying, and putting away in paper, the bulbs of Hyacinths, Tulips, etc.? A bulb planted in October, blooming, say late in April, and requiring six or eight weeks to ripen its leaves, is in the ground nearly eight months at any rate. Why should it not remain there the remaining four, as it does in its native state?"

3. Should *Lilium longiflorum* and other similar bulbs, when potted to bloom in the house, be treated like Hyacinths—set away in a dark cellar for two months, etc.?

4. What is the proper management of the Agapanthus, or blue African Lily? Can it be treated as a parlor plant and made to bloom in winter? If not, what is the winter treatment of it, and in summer should it be planted in the open ground, or merely sunk in its pot?

5. What is the right season for repotting parlor plants—in the spring, before they are set aside to rest for the summer; or in the autumn, before they are brought back into the house?

6. Should the foliage of Callas be allowed to dry off entirely during their season of rest, and the bulbs be left absolutely without water, or should the pot be watered enough to keep the leaves alive?

Though your MAGAZINE has taught me much, you see I may well sign myself AN INEXPERIENCED FLORICULTURIST, *Winchester, Mass.*

1. Plants that have been frosted should, as soon as possible, be sprinkled or showered with cold water—if the plant is small it may be dipped in water. After this treatment it is best to raise the temperature very gradually, or to allow the plants for a time to remain in a room at a comparatively low temperature; such a place is usually the cellar, and the plants may be placed therein and left for a day, and then brought up into a higher temperature. This treatment, if promptly administered, will save even quite tender plants that have been subjected to a severe frost.

2. There is no absolute necessity of lifting Hyacinth and Tulip bulbs. They will live if one cares to leave them in the ground, but can be removed without any injury to the bulbs, and,

as they flower early in the spring, it is usually convenient to clear the ground and plant it again, so that it may be ornamented during the summer and fall. Another advantage is that the bulbs may be replanted just as they are wanted for the next season's flowering. In some neglected gardens Hyacinth and Tulip bulbs are left in the ground year after year without being disturbed, and gradually deteriorate under this treatment. The Hyacinth, as is well understood, will gradually depreciate under any treatment after once blooming.

3. It is much better to get the roots of Lilies into an active state of growth before the stem starts; to do this, after potting the bulbs, stand them away in a dark and comparatively cold place until the roots reach the sides of the pot. If you will dig up a Lily bulb from the garden in the spring, just before it is time to start to grow, you will find that it is abundantly supplied with roots, ready to answer to the demands of the foliage when it breaks out. It is a wise imitation to follow the example of nature.

4. The Agapanthus is not a winter-blooming plant; it flowers usually about midsummer. It is customary to leave the plant without repotting two or three years as, in this way, it blooms more profusely. When the plants become quite large and the pot crowded with roots they may be repotted early in the fall, after the flowering season is over. The soil should be carefully worked out from the interlaced roots and then the crowns can be divided with a strong knife or chisel. The soil used should be a strong, fibrous loam, with about equal parts of leaf mold and sand, and about a fifth part old, decomposed manure; place in a rather large-sized pot, with good drainage, and press the soil firmly down. After potting set the plants in a shady, sheltered spot, supply liberally with water; after they are well started expose them freely to the sunlight. During winter the plants should be kept in a comparatively low temperature and given water very moderately; in spring give more heat and more water, and when the blooming season arrives the supply of water

should be very liberal, and the most favorable condition for them is to stand in pans of water. Treated in this way the blooms will last a long time. The foliage of this plant, and especially the variegated-leaved variety, is very graceful and beautiful, and its large umbels of blue flowers well merit its Greek name, meaning *amiable flower*.

5. This question is so general it is impossible to answer it definitely and in a few words. Those plants that are expected to make most of their growth during the spring may be repotted the last of winter or early in spring; those that are to make their growth during summer may be repotted in May or June; while winter-growing plants may be potted in August, September and October. A plant that has made little or no growth during its proper growing season, and shows by its small leaves and general appearance that it is unthrifty, should be treated to a new soil and placed in the most favorable conditions of growth. To state the whole subject in another way, the repotting of a plant depends upon its kind—which involves its special requirements—the condition of the plant, and the result desired to be obtained.

6. The practice of drying off Callas during the summer and leaving them almost or entirely without water has been, and still is, practiced by many successful cultivators, but we think the better way is to turn the bulbs out into the garden, from June until the last of August, and then lift them and pot for winter-blooming.

THE ABRONIA.

MR. VICK:—For a good many years I had tried to grow the Abronia, and with indifferent success, until I saw in one of your numbers a record of success with self-sown seeds. So, I tried again and had the good fortune to save three plants, which I took great care of, that they might form seed, which they did in great abundance. Now I get plenty of plants from self-sown



seeds, and think it would be a good plan to call the attention of your readers to this very delicate, pretty flower, and its proper mode of culture.—E. T. W., *Seneca Co., N. Y.*

The Abronias are truly very pretty plants, with umbels of star-shaped, sweet-scented flowers, and resembling the Verbena both in the flower and habit of the plant. They are natives of California, and in their native home make a most beautiful flowery carpet. Two

varieties are cultivated, *A. umbellata* and *A. arenaria*. The flowers of *A. umbellata*, the variety shown in our engraving, are of a delicate color, with a whitish eye and quite fragrant. *A. arenaria* has yellow flowers and abounds on



the barren, white sand hills on the shores of the Pacific Ocean, even within twenty feet of high water mark. These sand knolls are made gay by this pretty plant, while no other sign of vegetation is seen around. The branches seem to be mainly composed of sand, and particles of clean sand are constantly dropping from the dried specimens we brought home on our last return from the Pacific. It is known in California as the Sand Plant, which is the meaning of its name *arenaria*, from the Latin word *arena*, sand.

In describing the Ammobium in the February number we stated that "for a time it was called the Sand-flower, and the Latin name, *Ammobium*, means the same." We might have further explained, that this Latinized word was of Greek origin, being composed of *amos*, sand; and *bio*, to live.

INSECTS ON PINE TREES.

MR. VICK:—Can you give a remedy for black ants on my Evergreen trees? They have injured them by eating the bark off the tender shoots; small White Pines in some instances are entirely destroyed. There are winged ants, or what much resemble ants, that are very numerous. If you have anything that will drive them away I shall be glad to know it.—S. B. S., *Chippewa Falls, Wis.*

Kerosene or coal oil mixed with water, in the proportion of a tablespoonful, or a little more, to a gallon of water, and applied to the foliage of plants infested with insects, has proved to be a valuable insecticide. For washing the bark or bodies of trees the proportion of oil to water could be considerably increased—probably doubled. We advise this method to be carefully tested, and shall be pleased to learn results. Probably the liquid can be best applied with a syringe.

HOME FLOWERS.

MR. JAMES VICK:—I thought I would write you a few lines in regard to our success in flower culture, and also to ask a little information. We had Pansies that bloomed all summer and up to the middle of November. Many measured two inches, and others less. The Ten-Weeks Stock bloomed all summer, and we now have two blooming in the house. We also have plants of Gladiolus, Tuberoses and Tritomas, which have been much admired. How can the atmosphere of a common living room be kept moist enough for the good of the plants? Will a Carnation or Pink flower in winter if taken in the house—one that has grown from seed sown in the spring? There is a plant that is called Wax Plant. Some people say if it blooms it is a sign of a death. The plant has very thick, light-green leaves, very smooth. Can you tell anything about it, or do you believe anything of the kind? I have never seen it in bloom.—J. W. Z., *Powhatan, O.*

There are various ways of obtaining a moist atmosphere, though it is difficult to obtain in a living room the moisture of a conservatory or greenhouse. If dishes of water are kept in the



WAX PLANT.

room, the water will evaporate, and, of course, give moisture to the air. If the plants are so placed that they can be syringed every morning without injury to the floor or furniture it will help a great deal. The best of all is to shut off the plants from the living room by glass doors. This is easily done when they are placed in a bay window or recess. Then the air can be kept just right without difficulty.

Pinks will not flower in winter sufficiently to pay for the trouble. There is a class of Carnations that flower abundantly in the winter, and under quite ordinary treatment. They are known as the ever-blooming and winter-flowering, and are bright crimson and white. The common Carnations are not winter-flowering, and, like the Pinks, are not desirable for house plants.

The Wax Plant, *Hoya*, is a very good, clean-leaved plant, and bears pretty clusters of star-like, waxy flowers; but if those who flowered it had to die for it, a good many of us live folks should be in the cemetery. Either there is

nothing in this story or we have very successfully cheated the old fellow who goes about with a big scythe.

VERBENAS IN WINTER.

MR. VICK:—I must tell you of my luck with Verbenas. I took some slips about the middle of summer and started them in small pots, then I took them and put them all into one large pot, and now they are all budded and one is in bloom. It is very sweet—the most fragrant one I ever saw. The color is light pink, with the cluster very large. Can you tell me its name? I give my plants liquid hen manure once in two weeks and soot water once a week. I had a young *Calla* that froze down, but the root did not kill. It soon commenced growing and sent up a flower. Did the freezing cause it to bloom sooner than it otherwise would? A great many people complain that *Oxalis* will not open in cloudy weather. I tell them to keep them wetter. I did mine so and they remained open all day. The variety is *Oxalis floribunda*. I send you leaves of what we call Strawberry Geranium: What is its proper name? Also, some seed for name.—MRS. P. WENTWORTH, JR., *Vermont.*

So few persons succeed with Verbenas in the house that we publish the above for the benefit of any who wish to try them. *Callas* bloom more freely if the roots are allowed to become dry. We suppose the freezing had about the same effect, but would not advise all who have *Callas* to freeze them. Some varieties of *Oxalis* will not open their flowers without sunshine, *O. versicolor* especially. *O. floribunda* will flower in spite of cloudy weather, being the freest bloomer of the whole family. The Strawberry Geranium is *Saxifraga sarmen-tosa*. The seed we cannot name.

PROLIFIC CAULIFLOWER.

I wish to ask you if you ever saw two heads of Cauliflower taken from one stem or plant in one season? On the 28th of June, from a plant of extra-early Erfurt Cauliflower, I cut a head twelve inches in diameter, and the middle of September I cut another thirteen inches in diameter. The plant had not a double stem, but, after cutting the first time, a new stem started from the old one and bore the second head.—G. C., *Santa Fee, N.M.*

The production of seed is the grand climax in the life of a plant, and if the conditions are at all favorable this end will not be thwarted; starving in poor soil, injury and mutilation usually hasten seed-bearing. In the case of our correspondent his vigorous plant survived an operation usually fatal, and, putting forth its latent energies, succeeded again nearly to a state of fruition—to that of undeveloped flower buds.

Trailing Arbutus.—MR. VICK:—I would be very much pleased if you would describe and illustrate the Partridge Berry vine and the Trailing Arbutus, and say whether you could furnish seeds or plants, and at what price. By answering the above in your MAGAZINE you will greatly oblige.—L. A. P.

It is useless to try to grow Trailing Arbutus or the Partridge Berry with common garden culture.

CYCLAMEN PERSICUM.

MR. VICK:—Will you please give me a little instruction in raising Cyclamen from seed? Should they be watered and kept growing continuously from the time the seeds come up until their time of flowering, or should they at any time be allowed to rest? I have never been less successful with any seed after they had come up; for instance, I had twenty-nine little plants from seed last spring, I gave a friend a few, and transplanted the rest in a larger box than the seed box; they grew all summer and looked well; late in the autumn I watered them a little occasionally, and at times they were quite dry. The leaves dropped off and I thought I would look for the bulbs. I found only six, about the size of a small pea, and indications that the others had rotted.—S. B., Philadelphia, Pa.

Seed of the Cyclamen should be sown in shallow pots or pans. Sow thinly and cover with a light of glass. Then place on a shelf near the window in a moderately warm place. Remove the light of glass as soon as the young



plants appear. As soon as they are large enough to handle, say in their third leaf, prick out into pots or boxes an inch apart. When they are well rooted, pot off singly in three-inch pots. The soil should be loam with an abundance of leaf-mould and sharp sand. In potting let two-thirds of the bulb be above the soil, so that the leaves can start free and clear from dirt. In the summer they can be plunged in a north border, where they will get two or three hours sun a day, and where they can be conveniently syringed. This should be done every two or three days to keep the red spider down. By the middle of September they should be repotted and brought into the house. They dislike much fire-heat, doing much better in a cool, airy place. While in the house the tops of the plants should be frequently dipped in water, as they are subject to attacks of the red spider, which soon destroys the beauty of the foliage. The main point is to keep the plants growing all the time. Formerly the practice was to let them rest through the summer. We believe all

the best growers have now abandoned that method.

Our correspondent strongly recommends the use of Glenn's Sulphur Soap for both aphids (green fly) and the red spider—making a weak solution and applying it with a syringe.

PROPAGATING THE TUBEROSE.

MR. VICK:—Last year, in October or November, I received a Tuberose bulb. I put it immediately into earth, as instructed, but for four months it did not grow at all. In March it commenced to grow, and in June it bloomed. After it was done blooming I left it still in the earth, and it continued to grow, forming new bulbs—some half-dozen new shoots from the old bulb. Will you be so kind as to inform me how to proceed with it? I suppose it requires some rest, but I do not understand its needs well enough to feel sure I shall not injure it by ignorance. Shall I separate the new bulbs, and when? They are all quite small. I should be very thankful to you for a little information on the subject.—MRS. W. O. F., Biddeford, Me.

Your young Tuberose bulbs can be removed from the pots and shaken out and placed away on a shelf in a warm room, and kept until the weather is settled and the ground warm in the spring, and danger of frost is past. The temperature of the room where the bulbs are stored should never fall below fifty degrees. It is absolutely necessary that they be kept dry and warm. When it is safe to plant corn or melons it will do to separate, and put out the young Tuberose bulbs; they should be placed in rich, mellow soil and covered to the depth of four inches or more. As the plants require about a month to make their appearance above the ground, the soil should be carefully hoed, or hand-weeded, to keep it clean. Frequent hoeing during the summer will maintain a vigorous growth; and it is important that they be given good culture if good bulbs are desired. When they have matured in the fall, say in October, they should be lifted, their tops cut away, and removed to occupy again the dry, warm room for the winter season.

If the young bulbs are selected and only the largest and strongest used, and given the best cultivation, the most of them will make flowering bulbs at the end of the first season. When weak bulbs are employed it takes two and sometimes three years to bring them to a flowering condition; with such bulbs there is great danger as, before the growing season is over, the flower stem often pushes so far that it is sure to perish during the winter, and thus the bulb is lost.

For ordinary cultivators it is scarcely worth the trouble to raise one's own bulbs; this whole work is done so much better by those making a business of it, it is cheaper and usually more satisfactory to buy good flowering bulbs in the spring and, after flowering, throw away the old

bulbs and the offsets. As a matter of fancy, some may occasionally want to raise flowering bulbs from the young ones, but it is an operation demanding considerable skill, and usually better results may be obtained by attention to other subjects.

EARTHING UP CELERY.

MR. VICK:—You say the dirt should not be allowed to get between the leaves of Celery. How can this be avoided in earthing up? Of course one can hold the leaves together with one hand and draw the dirt to the plant with the other, but some dirt will get in. Please answer.—F. P. S., *Lexington, Ky.*

Drawing the leaves of the plants together and holding them until the earth is placed about them is the usual mode of operating. It is more convenient that one person should hold the leaves while another draws up the soil. When a large quantity is to be earthed three men usually work together—one with a spade or shovel on each side of the row and the third one holding the plants. This is the most expeditious method, and very satisfactory.

When one person is to do the whole work we have found it best to tie up the leaves of each plant with a bit of common cotton twine, going over all the plants in this way before commencing to earth up. It is necessary to tie loosely, so as not to impede the growth of the young leaves from the heart or crown. But loose tying will allow the entrance of dirt, more or less, and to remedy this we saw tried, the last season, at our suggestion, a new process, which proved entirely satisfactory, and which, we think, will be an especial benefit to cultivators of family gardens. Some coarse wrapping paper, of the common small size, was folded so as to be three-fold in thickness and about four inches in width; this was then loosely wrapped about the plant so that the upper edge would be at the desired height for earthing, and secured with a piece of cotton twine passed twice around the piece and tied. All the plants now standing erect and trim could be easily worked about, and the earthing was quickly performed and the dirt was entirely excluded. The time occupied may have been more than if done in the ordinary way, but this is regained at the next earthing, for then, if the wrapping has been properly done, all that is necessary is to take hold of the wrapper on each side and draw it up as high as the soil is to go the second time, and the plants again stand ready to receive the earth. For a person working alone we think it the quickest and most thorough way of operating. There need be no expense for the paper, for the wrapping paper that comes into the house will suffice; if this should be lacking, newspapers will do.

CELERY DISEASE.

JAMES VICK, ESQ:—I send you to-day by mail a head of Celery, and would be very much obliged if you would tell in the next number of the *MAGAZINE* what ails it. I have raised Celery for ten years, and never had any failure until now, and as the cultivation is the same, I can't account for the disease. It appears at first like yellowish white specks on the leaves, and continues till, as you will see, the whole leaf-stalk withers and decays. The disease, for such I am sure it is, appeared first in a trench of early Celery, the plants for which I procured from a nursery. It looked at first, the last of August, as if it had been watered and a hot sun shone on it while wet; soon the stalks began to die, and a head in one place and three or four in another, disappeared entirely.

I found about the middle of September that trenches of plants of my own raising, from seed procured of you, were affected; also extra plants left in the seed-bed, and neither transplanted nor earthed up. At this time Beets, Parsnips and Swiss Chards are in the same condition. Till this summer we have always found a large green worm, known here as Celery or Parsley worm, on the Celery in such numbers that I had them picked off and destroyed; just *three* have been killed this year.

I have written thus at length, at the risk of tiring your patience, that you might understand the case as well as possible, and if you can give a remedy please do so, for I fear others will be in as bad a fix as myself, if they are not already. We are very fond of Celery, and I have over fifteen hundred heads, or rather, had before they died off. I never allowed it to be touched while the dew was on it, or after a rain.—K. T. R. GRAVES, *Au Sable Forks, N. Y.*

If any of our readers have suffered in this way we would be happy to publish the facts, and especially any facts that would throw any light on either the cause or cure.

POINSETTIA PULCHERRIMA.

MR. JAMES VICK:—Please find enclosed \$1.75, the present year's subscription to your *MAGAZINE* and the amount charged for the binding of last year's number, which I think extremely low-priced. My Poinsettia pulcherrima has grown in very bad shape; its two long branches, which remind one of the horns on the native Texan cow, not any more ornamental or graceful. Please advise me how to manage it.—Mrs. C. A. K., *Weatherford, Texas.*

Proceed immediately to cut down the branches within two or three inches of the old wood, working off carefully some of the soil from the roots, repot the plant into a smaller pot than the one it has occupied; give it a watering, place it where it will get more heat, and encourage it to start into growth. As soon as the weather is warm and settled remove the plant from the pot to a good rich spot in the garden, and see that it does not lack water. By attention to it during the summer it will make a fine growth, and in autumn, say in October at your place, it can be lifted and carefully repotted into a large-sized pot, and removed to the house, when, for a few days, it will be necessary to exclude it from the direct sunshine. If now kept in a temperature not above seventy-five or below fifty-five degrees, it will be preserved in good condition through the winter season.

QUESTIONS AND ANSWERS.

MR. VICK:—1. Will *Caladiums* do well in the house in winter?

2. What treatment does the *Olea fragrans* require?

3. What upright plant can I obtain that will grow well in water? I have in the house a tub of water with a *Nymphaea odorata* growing in it, and would like a plant that will grow up out of the water. I would also like one that will droop over the side of the tub.

4. Will Hyacinths that blossom in the house in the winter do well another winter in the same situation? If not, what shall I do with them?

5. Will the white and the pink *Oxalis* do well in the same pot or basket? I have been told that they would not. Mine are so planted. The pink one seems more robust, although the white one was the larger bulb and most advanced when I received them.

6. What treatment does the *Laurestinus* require, and how old must it be to blossom?

My plants are growing nicely, they thrive as if by magic; thanks to the instructions I have received from you as to their care.—MRS. C. M., Mt. Pleasant, Mich.

1. *Caladium esculentum* is a rather coarse plant for the house, at least, such is our own taste. The bulbs or corms should be allowed a season of rest in winter. The Spotted *Caladiums* are very pretty but not quite adapted to ordinary house culture.

2. *Olea fragrans* requires no special treatment. Potted in a rich, friable mold and kept in a temperature ranging from forty-five to sixty-five degrees, with attention to cleanliness of leaves, freedom from insects, and judicious watering, it will be found to thrive.

3. The most satisfactory upright water plant is the well-known *Calla* or Egyptian Lily; besides this the common Pickerel-weed, *Pontederia cordata*, and the Arrow-head, *Sagittaria variabilis*, which can be procured from small ponds in most parts of the country, are very ornamental and desirable. A water plant that will trail over the sides of the vessel is more difficult to be found.

4. Hyacinth bulbs after blooming once in the house will not again throw strong spikes of flowers, and should be planted in the open ground the next season, if not thrown away. Every autumn it is necessary to procure strong bulbs that have come directly from the Holland growers, if one expects good, fine blooms.

5. The white and the pink *Oxalis*, *O. floribunda alba* and *rosea*, do well in the same pot or basket. The pink variety grows a little stronger than the white one, but they grow admirably together and form a beautiful ornament.

6. The *Laurestinus*, or *Viburnum tinus*, is a shrubby, house or conservatory plant in this country—in some parts of Europe it is a hardy, open-air shrub. It should have treatment similar to the *Olea fragrans*, as noticed above. The plants come into bloom usually the third year from the cutting. It produces white, fragrant flowers in great profusion.

PRICKLY COMFREY.

The Prickly Comfrey was praised and advertised in many of the Agricultural papers, and the newspapers, and I obtained some roots and planted them, and they grew, and I guess would make a pretty good crop of leaves, and so would dock, just as large a crop, and a good deal larger; but what good would it be? I can't find an animal on my place that will touch the stuff. They seem to feel insulted when I offer it to them. Perhaps I could starve them to it. One of my neighbors says I could, but I don't propose to starve them to anything. I would be ashamed to look them in the face while the starving process was going on, and would have to disguise myself and sneak around the front way, making believe that I was not at home. I think nature has taught animals what is good for them, and it isn't best to starve them so as to compel them to eat what they do not relish.—AN OLD FARMER.

Never have we said one word in praise of Comfrey. We have known the plant ever since we were born, almost, and never learned that it possessed any value as a forage plant. We have grown it for trial since attention was first directed to it for agricultural purposes, and have not found an animal that would do more than smell it. In the March number of last year we expressed our opinion of the excitement regarding it in the following language:

"Some American editors have recently had their attention attracted to this subject, and now there is a hue and cry all over the country about the Comfrey, and hundreds of people are writing for seeds. The plant is propagated by divisions of the roots. This is a nine days wonder. BARNUM, and he knows a good deal about human nature, says the people like to be humbugged. There may be some good in this Comfrey, but we have never found a plant that we considered so valuable for a summer green crop in America as corn sown in drills."

HOLLAND BULBS IN THE SOUTH.

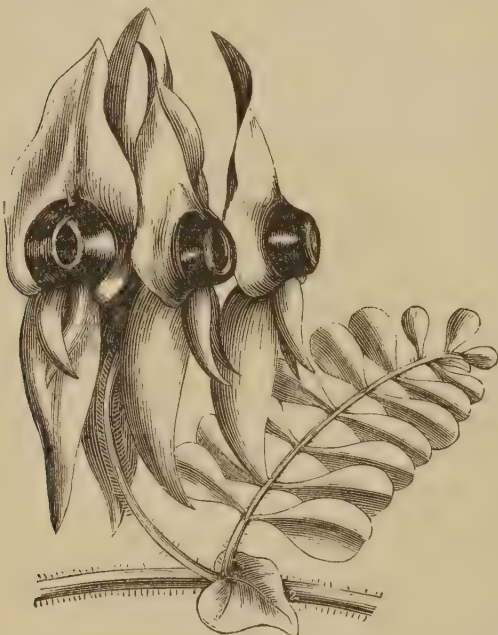
Have any of your southern readers had any experience in the culture of the Holland bulbs, such as Crocuses, Tulips, Hyacinths, Scillas and Iris. Can they be raised in the extreme south, and if so, when should they be planted, and in what month will they bloom. It is almost the universal testimony of all with whom I have talked that they will not grow here. Mr. Vick will confer a great favor upon many if he will inform us how far south he sends the Holland bulbs, and what success his southern customers have with them. Strangely enough nothing is said about it in the otherwise valuable FLORAL GUIDE, and thus we are left, not "out in the cold," but in deplorable ignorance. In this famed "Land of flowers" flowers are so scarce and difficult to raise that we are anxious to get all that can be made to grow here.—W. H. H., Orange Lake, Florida.

Large numbers of bulbs are sent every year to all parts of the south, and we have had many very satisfactory statements of their success. We have no doubt our southern friends could make reports that would compare favorably with more northern cultivators, and we shall be pleased to hear from them on this subject and give them space in our columns.

STURT'S PEA OF THE DESERT.

This beautiful little plant, of which I send some seeds, was discovered by Sturt, one of the explorers of this continent. They must first be soaked for at least twenty-four hours, or until the seed swells, (some will lay in soak two or three days before exhibiting signs of vitality). They should then be placed in a bed of sand, without loam, mold or manure of any kind. The best plan is just to punch the finger flatly down about half an inch, lay in the swelled seed and cover it with sand.—S. W. VINEY, *Victoria, Australia*.

The flower described by our correspondent is the *Clianthus Dampieri*. The name of the genus is derived from the Greek, and signifies Glory Flower. The specific name was given, no doubt, in honor of the English navigator, Dampier. It is one of the most beautiful



plants in the world, but, unfortunately, is difficult of cultivation. The flowers are borne in clusters of four or five, bright scarlet, with a large blackish-purple base, as shown in the engraving. The foliage is of a pale-green color and is thickly covered with very long white hairs. Since the native plants in Australia have been in a measure destroyed by cultivation, it has been difficult, and sometimes impossible, to obtain seed, the quantity grown from cultivated plants being quite insufficient to supply the demand. The instructions for starting the seed are just what experience taught us after many trials.

PITS FOR FLOWERS.

You say little about pits, and describe nothing that comes near them but the cold-frame. Ladies here have a sort of cellar with glass roof, which we call pits, where we keep flowers very successfully in winter, using no heat, except in extreme weather. Mine opens out of our furnace cellar, and I could have hot-house heat if I wished. I have splendid Lantanas, Fuschias, Gerani-

ums without number, Callas, &c., in mine. I am so much farther south than you that I can do more than you promise out of doors. I wish you could see Roses as we have them. Mine are ten inches in circumference; Salvias five feet high, a mass of bloom; Balsams an inch thick, or double, I should say, the nicest I ever saw. Pansies I do not succeed with. Do tell me how I may, I am very anxious to do so.—MRS. M. S. C., *Portsmouth, O.*

Those pits, which are half-way conservatories, are very useful, and one somewhat similar will be found described and illustrated in this number. You will succeed with Pansies only in the early spring and autumn. The fine weather which produces so many fine things is not favorable to everything, and least of all to the Pansy. And this is right and proper. If Portsmouth, Ohio, produced all the good things, we would all want to live there, so it is best to have the good things scattered and a little mixed.

BOSTON SMILAX.

MR. VICK :—My Boston Smilax, which I purchased last fall, had several shoots six inches long on it. I potted it, but by accident it was left in an out-room and the shoots froze. I cut them off, and in a few days two other shoots started up, and they are now two feet or more in length and not a single leaf. Is not that a little singular? It seems to be healthy and growing fast. Now, I will be much obliged to you if you will tell me what to do for it, for I think it is so sweet, and want very much to have it grow.—MRS. DR. J. B. M., *Maryville, Missouri*.

The Smilax is doing well, and in time the leaves will show themselves. The appearance of the plant described above is as it usually is in the early stage of its growth.

HYDRANGEA PANICULATA.

I must tell you what a beautiful plant my fifty cent Hydrangea grew to be last summer. I received it the 20th of April, and set it out in the ground the same day. Apparently it didn't stop growing at all for the removal, and about the first of August it commenced to bloom. There were eight flower stalks, each one bearing a handsome bunch of flowers, the largest one measuring at the base twenty-one and one-half inches around. It tapered off to a point, and was twelve inches long. Was not that doing beautifully?—MARY L., *Port Jefferson*.

THE WINTER IN CALIFORNIA.

Our California friends have had a taste of winter. Colonel Warren, of the *California Farmer*, writes: "We have had the most severe cold winter ever known here. The pipes in the gardens at San Jose and Santa Clara froze solid and burst. What think you of that?—for that sunny valley." It is a little comfort to know that we are not having all the bad time here. Our English friends complain, too, quite severely of the weather this winter.

PLANTS FOR SHADE.

MR. VICK:—Will you send me a list of flowers, hardy annuals preferable, or others if you think best, which would do well on an island. The soil is about half sand and leaf mold, with



SINGLE CLARKIA.

considerable shade, although there are some parts of the day when most all of the beds have some sunshine. The island is much used by picnic parties and I am endeavoring to beautify by planting or sowing flowers.—M. C. L., Bethlehem, Pa.

A good many of your readers have little gardens where there is but little sun, and others have certain parts of their garden partially shaded, which they do not like to have entirely destitute of flowers. I am in this condition, so



DOUBLE CLARKIA.

have had some experience. I find the *Campanula Carpatica* does exceedingly well in partial shade, and I have two colors—white and blue; a few Geraniums, Fuchsias, Foliage Plants and Ferns make a pretty good show; but I always have some annuals. The Clarkia I never could succeed with until I tried it in a

shady place, and now I would not like to miss the Clarkias even one summer, they are so chaste and fairy-like. I may also say the same of the Nemophilas, for they do like the shade, and are so handsome and flower so long and so abundantly when in a shady, cool place. The plant is so tender and succulent that it seems to dry up in the sun. I have also in the shade



CAMPANULA CARPATICA.

had fine success with Pansy, Mimulus, Godetia, Myosotis, Dwarf Tropæolum, Whitlavia, Mignonette and Sweet Alyssum.

I think my place has about two hours of sun in the day. With entire shade I have never succeeded with anything that I have tried, but Ivies and Ferns. I have only a small corner thus densely shaded and so have not much experience.—G. W. G., Norton, O.

A GOOD DANVERS ONION CROP.—Good, choice Onion seed is cheap at almost any price, and cheap, poor seed is dear at a gift, with a premium thrown in. CHAS. SPENCER, of Mohawk, N. Y., appreciates this fact, and wrote to know if we could advise where he could get good true Onion seed that would grow. So we recommended seed that we assured him would produce ninety good Onions for every one hundred seeds sown. Mr. S. wrote Jan. 16th:—"You spoke of ninety per cent. of the Onion seed producing nice bulbs. It did better than that, I think, as I raised two hundred and twelve bushels of Yellow Danvers on one quarter of an acre. Every seed came, and I guess sometimes two Onions from one seed."

IMPROVEMENT IN MANNERS.

The world is getting better in a good many ways. We can remember, some years ago, when the appearance of visitors to our grounds would cause almost as much alarm as a drove of stray cattle, and a guard was immediately sent to watch their motions. Every man, woman and child, almost, would run for something, pick the flowers, and ruthlessly destroy the plants; while the more cultivated and refined of the ladies would merely pick the choice Rose buds and eat them up. Now, not a plant is injured nor a flower picked, save in very rare cases. A correspondent, of Mantua, Ohio, is sorely tried, as will be seen by some remarks we extract from a long letter, but with patience these things will be all corrected:

"I was recently exhibiting to a wealthy woman (I was about to say lady) the January number of your beautiful MAGAZINE with a view to obtaining her subscription. Giving it a casual glance, the favorite of fortune soon became engaged in a somewhat "loud" conversation, when the book was repeatedly rolled, unrolled, changed from hand to hand; then set on end and made to serve as an elbow rest, until, when finally relinquished, it presented a more soiled appearance than would have followed a thorough perusal by myself and family, besides having several punctures through the elegant colored plate of Roses.

As you may imagine, I was in an agony of outraged feeling all the while this was going on, but courtesy (courtesy forsooth!) forbade my saying or doing anything to indicate that I was not reclining on a bed of Roses. May I ask why courtesy and good breeding on the part of some who have the means of cultivating and gratifying a refined taste, do not prevent *their* committing a breach of good manners?

Do you sometimes have people come to see the beautiful flowers and plants at your grounds, who pluck them without permission, or perchance ruthlessly handle some rare specimen regardless of its mute appeal, which seems to say: "Do you not see I cannot bear handling?" Some people seem to think flowers are to be treated as they treat infants, (by the way, wrong treatment even for them,) tossed, dandled and chucked under the chin; tousled and mussed to their heart's content."

MORNING GLORY FOR THE HOUSE.

MR. VICK:—I think it an item worthy of a place in your MAGAZINE that the common Morning Glory is one of the most satisfactory and free-blooming of winter house plants. If a few seeds are planted in a pot the 1st of November they will be in blossom in about eight

weeks, or by the 1st of January, and will continue to blossom for a long time. The plants make no effort to climb, and remain only eight or ten inches high; and they come into bloom in about one-half the time required by the Morning Glory in its usual out-door cultivation.

The Maurandya is one of the most beautiful winter climbers, if trained on twine around or across a window. The sprays and foliage are very delicate, and it blossoms abundantly. The white Maurandya is the most beautiful, but it is hard either to get plants of it or to get the seed true to color.

A correspondent in your February number asks the old question, how to get rid of the mealy bug. A solution of white hellebore is as fatal to scale and mealy bugs as it is to the currant worms and rose slugs.—W. F. C., *R. I.*

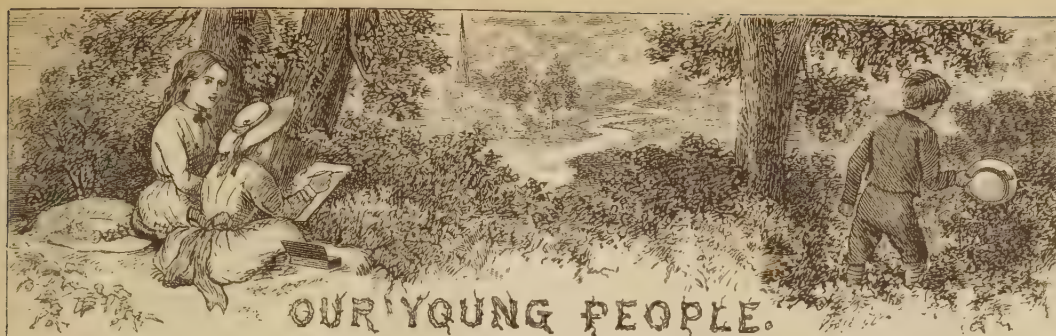
TO BLEACH BARLEY, OATS AND WHEAT.

I would like to give you a recipe for bleaching grain for ornamental purposes. The Barley, Oats and Wheat must be cut three or four weeks before it is ripe, placed in a tub or tank and enough boiling water poured upon it to scald it well. Take it out and let it drain, then take a tight box, large enough to let the top open with a tight cover; five or six inches below the top make a slat shelf, then take one-half pound of roll brimstone, pulverize coarsely, place it in a piece of paper in a dish, place the dish in the bottom of the box; after placing the grain on the slats, set fire to the paper, cover tight and let it smoke one night; spread in the sun next day and the thing is done. That is the way Rye straw is bleached for bonnets.—F. H. G., *New Bedford, Mass.*

A MAMMOTH RICINUS.

Permit me to tell you about a Castor Bean plant grown from seed bought last year. They were planted on the 15th of April, and continued to grow until killed in November by frost, attaining most gigantic proportions, but never maturing, having shown no signs of blooming. One plant attained an altitude of nearly twenty feet, the stalk measuring nineteen inches in circumference at the butt, and it was stout enough to bear the weight of a man, (130 pounds) who climbed it and stood on its branches five feet from the ground. The largest leaves were from forty-five to forty-eight inches in diameter. It was the largest Castor Bean plant I ever saw.—H. CASE, *Carlyle, Ill.*

FUCHSIAS.—I was never more pleased with anything than I was with a bed of Fuchsias which I grew last summer. It was a circular bed in front of a summer-house, a good deal shaded.—JAN M. J., *Seneca, N. Y.*



OUR YOUNG PEOPLE.

BOTANY FOR LITTLE FOLKS.

The Hydrangea is an old garden favorite that we are all familiar with; the sweet-scented Syringa, or Mock Orange, bears flowers of such



Fig. 150. Syringa.

beauty and fragrance that it takes a place in the front ranks of our hardy garden shrubs. The Currant and the Gooseberry, yielding their grateful fruits, are deservedly popular and extensively cultivated. All of these plants are considered by botanists as members of one family, but neither of them is a leading or representative member. The plant from which the family or order takes its name is an humble, little, herbaceous plant, called Saxifrage, or Saxifraga; and the name of the order is *Saxifragaceæ*, meaning plants like the Saxifrage. The name means a *rock breaker*, and, if it is not literally true that these plants break rocks, yet they delight to grow about and on rocks and to throw

have been fractured or split are, probably, sometimes forced apart. The name, also, has a significance in connection with a medicinal virtue the plants were supposed to possess, but which we now know them to be destitute of.

We are aware that the Saxifrage is not a familiar plant to most of our readers; the plants of our native, wild-growing species are so unpretentious that they escape the notice of the ordinary observer, and those varieties grown for ornament have, as yet, received but little attention from cultivators in this country. One example, however, we can point to that is looked upon in the light of an old friend by most plant-growers, and that is what is called Beefsteak Geranium, or Strawberry Geranium, *Saxifraga sarmentosa*, a favorite plant in hanging baskets and vases. It is a tender plant, not bearing exposure to frost, but an exceedingly vigorous grower and requiring but little attention, except a liberal supply of water in its growing season. It was brought here from Asia, and is now cultivated in all parts of the country. Besides the names mentioned, this plant is called Aaron's Beard, Wandering Jew, Mother of Thousands, Sailor Plant, &c.

To show the particular form of the flower of the Saxifrage we present illustrations from an annual species, fig. 153, called *tridactylites*, from *dactylus*, a finger, and *tri*, three, because the lower or root leaves are divided into three parts, like fingers spread out. This kind of Saxifrage is very common in England; it is an annual and grows upon old walls, starting early in the spring from self-sown seeds, and produces a panicle of white



Fig. 151. Sax. Pennsylvanica. Fig. 152. S. sarmentosa.

their roots down into their crevices; by the growth of the roots in these situations the portions of those rocks which from some cause



Fig. 153. S. tridactylites.

old walls, starting early in the spring from self-sown seeds, and produces a panicle of white

flowers. A single flower of this plant is shown at *fig. 154*. Here we perceive that the parts of the calyx, which are five in number, are joined together from the base upwards, for at least two-thirds of their length—in fact, they constitute a cup with a notched or toothed rim. By reference now to *fig. 155* we perceive that the calyx is joined to the ovary; its inner or upper surface adheres to the outer surface of the ovary. When a calyx has its parts united, as we see them in this case, the lower or cup part is called the tube, and the free part, as the teeth in this case, is called the limb; the opening where the limb separates from the tube is called the throat.

154. Saxifraga flower.

Formerly, when less was known accurately of the structure of flowers, the limb only was considered the calyx, and it was said to stand upon the ovary and the ovary was called inferior and the calyx superior; that is, the calyx was thought to be superior to the ovary and the ovary inferior, or below, the calyx. Now, that we know these ideas are wrong, the calyx is more properly said to be adherent to the ovary; but the old terms are still in common use and will probably continue.

At the line where the calyx separates from the ovary there is a thickening, forming a kind

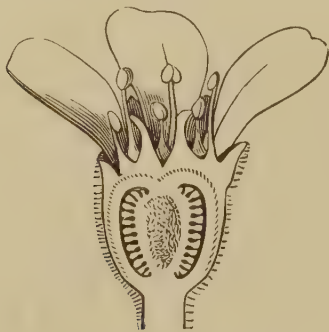
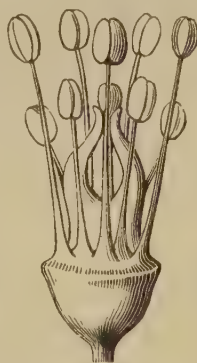


Fig. 155. Vertical section of flower.

of ring; this ring is called the disk, and on it, standing around the upper part of the ovary, are situated the petals alternately with the pointed divisions of the calyx, and within them are the ten stamens. The two pistils are shown at *fig. 156*, and a section of their united ovaries at *fig. 155*, where may be clearly seen the many seeds they produce. The diagram, *fig. 157*, exhibits the relation of all the parts as they exist in the bud.

About two hundred species of Saxifraga are known, and they are mostly inhabitants of the temperate and arctic regions, but especially of

the mountains and high hills of Europe and this country; the Alps of Switzerland, the Pyrenees, the mountainous parts of Great



156. Pistils & Stamens.

Britain, Austria, Spain, and other countries of Europe, and particularly Siberia, are the localities most favorable to it—in similar situations it is found in this country. The commonest of our wild species is *S. Virginensis*, which grows on rocks and dry hills from Canada to Georgia and west to the Pacific. Its white flowers are borne in dense clusters early in spring. Another species of very wide range is the swamp Saxifrage, *S. Pennsylvanica*, which grows in low, wet grounds in the northern States.

Most of the Saxifragas are evergreen perennials, and though, with few exceptions, they will bear great cold, they are injured by mild and damp weather in winter and by the extreme heat of our summers, and, consequently, are little adapted to general cultivation.

this statement, however, there are some notable exceptions, and first among them is one which, on account of its ability to live and thrive and proudly



erect its panicles of white flowers in the dust and fog of London, has acquired the name of London Pride—this is *S. umbrosa*, the subject of some remarks in former numbers of our MAGAZINE in reference to its identity. A plant that has so fitly obtained its good name by excellent traits of character should not be allowed



Fig. 158. *S. ligulata*.



Fig. 159. *S. crassifolia*.

to be deprived of it, even ignorantly, to apply to any other.

This plant, though a native of southern Europe, has been so long and so extensively cultivated in Great Britain that it has for a long

time been naturalized and may be found wild not only in England but in the mountainous parts of Scotland, Wales and Ireland; in Ireland it is called St. Patrick's Cabbage. The



Fig. 160. London Pride.

Saxifragas are admirably adapted for rock-work in partly shaded situations, and where sufficient moisture can be given to counteract the high summer heat. For this purpose and for cultivation in shady places a few kinds that have proved most satisfactory, besides London Pride, will be mentioned.

S. oppositifolia, or Opposite-leaved Saxifrage, is a very beautiful sort that, early in the spring, at the time of the blooming of the Snowdrop and the Crocus, produces large clusters of light purple, showy flowers. Although this species is a native of Europe it appears to have taken up its abode in this country, for it is found growing wild on the mountains at Willoughby Lake, Vt., and thence northward.

S. geum, or, as it is quite commonly called, the Kidney-leaved London Pride, is considered very fine, and as it is thrifty and grows freely with little care, is one of the best for rock-work.

S. pectinata is a very beautiful species. Its leaves are arranged in a perfect rosette and



Fig. 162. *S. pectinata*. Fig. 161. *S. geum*.

are of a peculiar silvery hue with the edges very curiously and prettily toothed. It is an admirable plant for the rockery, and may also be used as a border plant in shaded situations.

S. crassifolia, or Thick-leaved Saxifrage, fig. 159, has been cultivated to a considerable extent in the gardens of this country. It is a native of Siberia. The large, oval leaves are thick and fleshy and nearly evergreen. The

bright, rose-colored flowers, in an ample cyme, are borne on a stem a foot in height, early in the spring. This is probably one of the most vigorous and reliable sorts.

S. ligulata, figure 158, is a large-leaved species, of which there are two varieties; one



Fig. 163. *S. cordifolia*.

bearing tinted white or flesh-colored flowers, and the other rose-colored and of large size.

S. cordifolia, (fig. 163) as its name signifies, has heart-shaped leaves and of large size; its general appearance is similar to *S. crassifolia*. The flowers are of a very light rose or blush.

In the cultivation of these plants, as has been intimated, they should be given a situation partially shaded, with good drainage, and it will be found advantageous, when not employed as rockery plants, to prepare a bed for them with a considerable quantity of stones, brickbats, or old mortar intermingled with the soil. For such treatment they will fully repay with their early spring flowers and handsome foliage.

After the descriptions and illustrations that have been given it will be a very natural inquiry, why such plants as the *Hydrangea* and *Syringa*, &c., are arranged with the *Saxifragas*. The answer is that the relationship is traced by the formation of the flower, of the seed-vessel or fruit, and by the seed itself. In a large family, however, like this and, as we have previously seen, the *Rose* family, there are several subdivisions in which are grouped all those plants very nearly related, and these subdivisions, which are called sub-orders or tribes, bear a relation to each other. The real beauty, simplicity and truthfulness of the natu-



Fig. 164. *S. oppositifolia*.

ral system of botany, as now understood, is to be clearly comprehended only by the patient and industrious student who carefully examines, analyses and compares the humblest weeds as well as the most showy flowering plants; who

looks with equal scientific interest upon the loftiest tree of the forest and the fungus that grows upon its bark. We would not have our younger readers form an idea that the science of botany is perfect, completed or finished, and consequently that there is nothing for them but to go over the ground that many others have traveled. The fact is, the field is just opened, and although much has been done well, there is enough unknown to employ for a long, long time in the future every earnest worker; those that have preceded us have smoothed the road and pointed the directions for a new advance.

CELERY CULTURE.

I like Celery very much, but my father says it is too much trouble for him to bother with, so I have to grow it or not have any. I have always found that a hot summer and dry weather did not make good Celery, but a cold, wet summer was all right for it. An old gardener taught me that it was not best to start plants too early, because the most and best growth was made in the cool, moist weather of autumn, and I have found that he was right. By heeding this advice I always get very good Celery, but I could not keep it well. Before the winter was half gone it would decay, and for three years I lost more than half, and just when we wanted it the worst—the latter part of winter, when, I notice, everybody is almost starving for some fresh vegetable. That is the reason, I suppose, that people are willing to pay such high prices for vegetables in the early spring. This is very well in the cities, but in the country such things are not for sale, and if they were we could not afford to buy them; so we have to provide for ourselves, or go without.

Some time last summer you told us, in one of your MAGAZINES, that Celery was a very hardy plant and could bear a good deal of frost without being harmed, and that rotting was occasioned by keeping it too warm. I hardly thought this was the reason why mine did not keep better; and yet, I remembered that last winter was unusually warm, and that my Celery rotted worse than ever before. So, I said, perhaps there was something in the idea, and that it might as well freeze as decay. This winter I did not cover it until late, and after some pretty good frosts I threw over the trenches (which I dug in depth about six inches less than the height of the stalks, so that the leaves were quite above the ground) some straw, and after this some leaves. A good many of the leaves blew off, and one cold day, on observing this, I thought surely my Celery was gone for good, but I spread on some more leaves, of which I had a pile, gathered up from the orch-

ard and garden, and over these I placed some cornstalks to keep them down.

Now, the 10th day of February, I don't think I have a damaged stalk of Celery in the whole lot, and I believe it to be better than when placed in the trenches. The plan seems to be a perfect success, and, perhaps, I may now go to the other extreme, for as soon as the weather becomes a little warmer I shall remove a part of the covering, and, finally, all of it. In this way I think I can keep my Celery good until the 1st of May, and, if I do, it will be a great thing, for it has never been done in this part of the country, that I have ever heard of.

I thought that my experience might be useful to some of the young readers of your MAGAZINE, and induce some to try to grow this very nice vegetable, and perhaps induce some who may have become discouraged to try again.—DEWITT C. F., *Oneida Co., N. Y.*

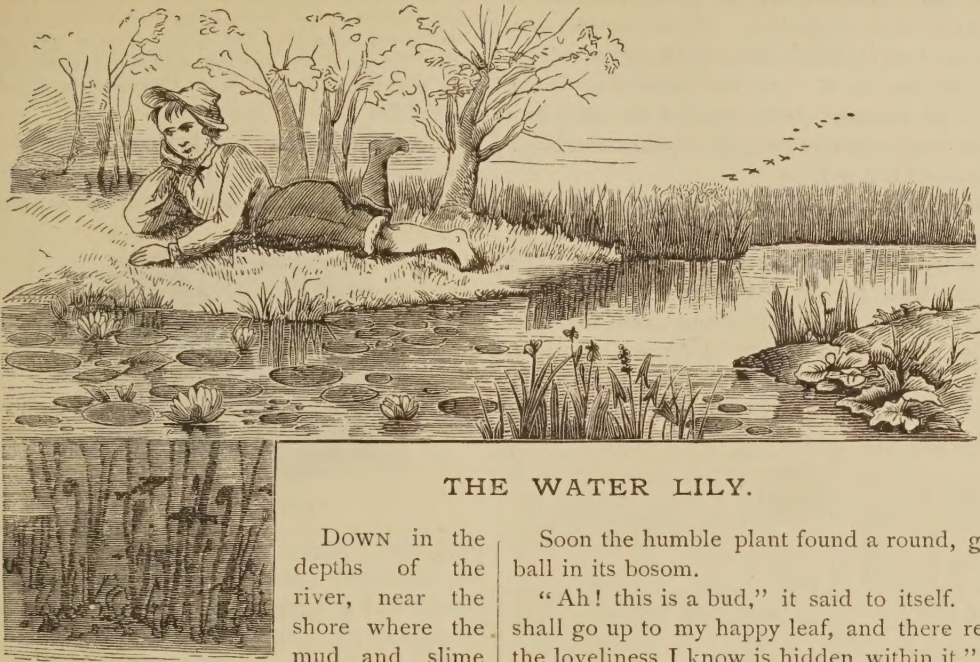
FUN WITH THE FLOWERS.

MR. VICK:—I have been thinking that your young readers might be interested in knowing something of what my children do with flowers. They make wreaths and necklaces of the wild, as well as of some of the cultivated flowers; and this, I believe, all children do; but they are very ingenious in making faces from flowers, and some of them are funny enough. I send you one made from the wild Daisy, and you will see that by a little trimming, and some paint from their box of water colors, it makes a pretty good face. I could tell you about others, but the little children who read your Youths' Department will not be slow in finding out more than I can tell them, after they once get the idea. There is plenty of pleasure in it, and a good hunt for the wild flowers gives health and appetite.—M. J.



A NEW STYLE OF HOT BED.—I see you have a youth's column. I will tell the young folks something new. If you want a good Watermelon patch, and that early, put your seed in soak over night in a rag. Next morning put them under your sitting hen, keep the rag moist, and your seeds will all be sprouted in three or four days. Just try it. You know it is all in getting the seed to sprout.—G. W., *Fairville, Mo.*

PASSION FLOWER.—The inquiry regarding the Passion Flower, and several others, we will try to answer in our next number.



THE WATER LILY.

DOWN in the depths of the river, near the shore where the mud and slime

were not swept away by the current, grew a humble plant. The flags pressed about it, and thrust their leaves like green swords through the water up into the brightness and pure air, and the eel-grass made a tangled network above it. No one expected the little plant to amount to much.

But lying there in the ooze, it thought:—

“The water is luminous over my head; there is more brightness above than I have had. The flags and the rushes, swaying and fluttering up there, whisper together of the warm south wind, the gray clouds, and the glory of the sun. If I only could rise! If I only could!”

By-and-by the plant sent forth a leaf, an odd, round thing like a fan, and slowly it lifted the leaf on the summit of its flexible stem toward the surface of the water.

“Ho! Ho!” laughed the polliwogs, flouncing by, “what a droll leaf! When it gets to the surface, and we are frogs, ’twill be a fine seat for us while we sing, ‘Trick-sa-trix, Trick-sa-trix,’ and our old papa plays the trombone.”

“Pray, don’t be too pushing,” said the duck-weed. “You’re as well off as the rest of us. A plant of your condition in life ought to be modest. Don’t be too pushing; no good will come of it.”

The humble plant gave no heed to its neighbors’ comments, but patiently lifted the round leaf a little higher each day. One morning it felt a strange, electric thrill. The leaf had reached the surface of the river, and the sun shone upon it; and the tall flags parted a little to make room, while they whispered kindly, “Good morning, neighbor.”

Soon the humble plant found a round, green ball in its bosom.

“Ah! this is a bud,” it said to itself. “It shall go up to my happy leaf, and there reveal the loveliness I know is hidden within it.”

Patiently, as it had lifted the leaf, the plant lifted the bud toward the sunshine.

The dreamy summer days went by, and at last the round bud opened its sepals, and like a radiant, golden-hearted star of snow, a blossom lay upon the river and looked into the sky. The red-winged blackbirds flitting to and fro among the flags, sang to it; the south wind breathed its spicy fragrance; the tall flags whispered, “How beautiful! how beautiful!” and the hope of the humble plant was fulfilled.

Bertram Krause was the son of a poor laborer. His father wanted him to become a smith.

“Ah! now, if Bertram could shoe an ox, or mend a cart-wheel, that’s all I’d ask,” he would say.

But Bertram had different aspirations for himself. He wished to become an artist and paint great pictures like those in the cathedral, into which he often stole to dream and hope.

With a bit of charcoal he could sketch anything, and the lads thought it fine sport to be his models; but his father declared such idling wicked, and said:

“Who are you, Bertram Krause, to despise honest work such as your father has done all his life? You will never be worth your salt.”

One day Bertram went to the river bank to cut flags. He worked industriously all the morning, and at noon sat down upon the shore to eat his bread and cheese. He was hot, and after eating he stretched himself upon the grass and fell asleep. When he awoke the first thing he saw was a water-lily shining white among the flags.

“Hurrah!” he cried, “Hurrah! a water

lily!" and quickly springing up, he waded into the water and picked it. With the blossom came the long, trailing stem, the mud and slime still clinging to it. "This beauty is lowly born," he thought, as he smelled its spicy fragrance, and, with that thought, a plan and a hope came into his mind.

His mother was a quiet woman, who had learned to watch and wait, and she sympathized with him, and encouraged his dreams. To her he went with his plan, and she procured for him a sheet of coarse paper and some crayons.

With all the skill he had he drew a sketch of the river, the flags and the water lily amidst them; and when it was done he carried it tremblingly to a great artist in the city.

Years rolled away, and at the yearly art exhibition at Munich a picture appeared representing a summer sky, a tangle of reeds and flags, a stretch of sullen river, and upon the grassy shore a ragged, bare-foot boy, who was holding a water lily, at which he gazed with a look of love and joy.

"That," said an artist, "is by the celebrated Bertram Krause, and is called 'The Dawn of Hope!'"

A LITTLE MARIGOLD.

MR. VICK:—I had, last year, a very pretty little Marigold—a French Marigold, I think it was, but different from any I ever saw before. The flowers were single and small, and light yellow, and when the first flowers opened I felt like pulling the plants up and throwing



MARIGOLD FLOWER.

them away, because they were so small and insignificant; but the leaves were handsome, and I let them remain. As they grew older and larger they made very handsome plants, almost as round as a ball, and late in the

summer were covered with hundreds and, I guess, thousands of flowers that looked like yellow balls. I wonder if the flower is known, and, if so, can you tell me its name. The seed was sent me, with some others, by an aunt who lives in your State.—GEORGE N. T., Erie County, Pa.

The little Marigold described above by our young correspondent, is no doubt a French variety, introduced some ten or twelve years since,



MARIGOLD PLANT.

and called *Tagetes signata pumila*. *Tagetes* is the botanical name of what are known as French and African Marigold; *signata* is from a supposed resemblance of the little flowers to seals, and *pumila* means dwarf, given on account of the smallness and compactness of the plant.

AN ICE HOUSE.

MR. VICK:—We have a pond of spring water near our place, clear and good, and this winter it is frozen thick. Very few people in the country save ice, so that, in summer, we have only the cellar to depend upon to keep things cool. My brother and I have been thinking of an ice house. We have boards, some new and some old—the remains of an old barn, and what was left from making a new one—and we could make a small building very cheap, if we knew something about the philosophy of the matter—what to aim at. Please tell us as soon as you can, before the ice is gone.—JAMES AND WILLIAM, Livingston Co., N. Y.

To preserve ice it is necessary that a free escape should be provided for all water made by the thawing, or any that may come from the soil, a place of escape for warm air, and exclusion from the natural heat of the atmosphere. Make necessary drainage, and so arrange it that no air may enter through the drain. In a gravelly soil the natural drainage may be sufficient. Leave an opening at the top for the escape of warm air. No air will enter at this opening, because warm air will rise and not descend. As a protection against heat, make the walls double and fill in between them with sawdust. Pack the ice in solid.

GROWING ONIONS.—We hasten to respond to the inquiry, from a youth in Missouri, that Onion seeds should be sown as soon as the soil can be got ready in the spring. Onions seldom form fine bulbs if sown late. They must make a good growth before the hot weather commences.

